A Treatise on the Theory of Regulatory Compliance

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Abstract

This treatise provides some insights into certain assumptions related to regulatory compliance and the implications for regulatory researchers and policy-makers for the future development of rules and regulations. Once regulatory compliance decision making moves from requiring full compliance with all rules to a substantial regulatory compliance decision making approach, the measurement and monitoring systems employed to assess programs and facilities change dramatically.

Keywords: regulatory compliance, risk assessment, key indicators, licensing, monitoring, measurement

1. Introduction

Regulatory compliance is a sub-discipline within regulatory science that focuses on measurement, monitoring systems, risk assessment, and decision making based on regulatory compliance scoring. Regulatory compliance is dominated by nominal scale measurement, that is, either a facility is in or out of compliance with specific rules. There is no middle ground with regulatory compliance as there is with most quality measurements, which are generally made on an ordinal scale. However, some regulators feel that certain regulations are not or should not be subjected to nominal measurement.

A factor with regulatory compliance data is that they generally follow a very skewed frequency distribution, which limits analyses to non-parametric statistics. Because of the skewed data distribution, dichotomization of data is warranted, given the lack of variance in the regulatory compliance frequency distribution - the majority of facilities are either in full or substantial regulatory compliance.

An assumption within regulatory compliance is that full regulatory compliance, that is, 100 percent compliance with all rules, is the best (i.e., risk is minimized) possible scenario for the services being delivered and assessed. It is also assumed that all promulgated rules have an equal weight in their relative impact on the desired service delivery model, although this thinking has been changing over time regarding how rules are reviewed and complied with. This short treatise will examine the past 40 years of research delving into regulatory compliance measurement, and will provide some guidance to regulatory researchers and policy-makers as they move forward with both research and policy development related to rules. The data from these research studies have led to a Theory of Regulatory Compliance that demonstrates that substantial regulatory compliance and not full regulatory compliance is a more effective and efficient public policy as it relates to decision making on monitoring and licensing.

The results reported herein are drawn from human services delivery systems in the United States and Canada, such as early care and education, as well as child and adult residential services. The results are from state and provincial level licensing systems involving over 10,000 facilities serving over 100,000 clients. All the data are part of an international regulatory compliance database (https://data.mendeley.com/datasets/kzk6xxxx4d/1) maintained at the Research Institute for Key Indicators and the Pennsylvania State University.

2. Methods

Alternate methodologies, logic models, and algorithms were developed directly from the Theory of Regulatory Compliance once it was determined that substantial regulatory compliance produced better results than full regulatory compliance. These methodologies created a differential monitoring or targeted monitoring approach based on risk assessment, which measures client morbidity and/or mortality when individual rule
non-compliance is assessed, and the determination of key statistical predictors for overall regulatory compliance [3].

Briefly, the above methodologies provide cost-effective and efficient means for the ongoing monitoring of human service delivery systems by selecting and reviewing only those rules that either have a positive impact on clients, statistically predict overall regulatory compliance, or protect the health and safety of clients [3]. Based on regulatory compliance historical data, decisions could be made as to the frequency and depth of the reviews or inspections. Abbreviated reviews (inspections in which a subset of rules are measured), such as licensing key indicator rules or risk assessment rules, would only be done in those facilities having a history of high regulatory compliance. Those facilities with a history of high regulatory non-compliance would continue to receive full regulatory compliance reviews as they did in the past.

3. Results

Prior to 1979, it was always assumed that there was a linear relationship between regulatory compliance measures and program quality measures of human service facilities. In a study conducted in that year, which compared results from early care and education programs, in particular child care centers, this assumption did hold up when one went from low regulatory compliance to substantial regulatory compliance. However, the results from substantial regulatory compliance to full (100 percent) regulatory compliance did not show the same linear relationship. Rather, it showed that those programs that were in substantial instead of full compliance were actually scoring higher on the program quality measures.

Since 1979, this result has been replicated in many other early care and education delivery system studies, both nationally in the United States (Head Start) [1] and in several states (Georgia, Indiana, Pennsylvania) [2]. In all these studies, one finds a non-linear - rather than a linear - relationship between regulatory compliance and the overall quality of the facilities being assessed.

4. Discussion

Based on the results above, there are several assumptions within regulatory compliance that need to be reconsidered:

1. Public policies that require full (100 percent) compliance with all rules may not be in the best interest of the clients being served, nor an effective use of limited regulatory resources. Potentially, emphasis on substantial regulatory compliance may be a more effective and efficient public policy related to client outcomes when it comes to their health, safety, and quality of life. Note that substantial compliance is still very high regulatory compliance (99-97 percent compliance with all rules) and produces positive client outcomes. As stated above, regulatory compliance data are extremely skewed and not normally distributed. There is very little variance in the data and the majority of programs are in either full or substantial regulatory compliance.

2. If a jurisdiction focuses on a substantial regulatory compliance public policy it opens up many system enhancements, such as differential or targeted monitoring, risk assessment analysis, and statistical key indicator rules that have been demonstrated to be cost effective and efficient approaches to reviewing program performance. In a full regulatory compliance public policy approach, none of these system enhancements can be employed, with the possible exception of the key indicator approach as delineated in number four below.

3. If a jurisdiction takes the position that all rules are not equal, then a risk assessment or weighting approach becomes an alternative based on the assumption that certain rules place clients at greater risk of death, serious injury, or other types of harm.

4. Even if a jurisdiction does not have a licensing law that allows issuing licenses on the basis of substantial compliance, there is the possibility that key indicators could still be used for abbreviated reviews or inspections, if there is no prohibition in statute or regulation that expressly forbids the use of this approach, since key indicators statistically predict full regulatory compliance. In other words, all rules are statistically predicted to be in regulatory compliance based on the results of the key indicators. Therefore, technically, all rules have been reviewed albeit short of a full review or inspection.

5. Based on previous research, utilizing a risk assessment approach along with a key indicator approach is the most cost effective and efficient differential monitoring system model. The reason is that both predictive rules and those rules that place clients at greatest risk are always assessed when a site visit review or inspection is done. Many more jurisdictions use a risk assessment approach at this point, but there is a loss of predictive regulatory compliance by just using it.

6. Based on previous regulatory compliance history, only those facilities in high regulatory compliance would be eligible for abbreviated key indicator and risk assessment reviews, whereas those with a history of high regulatory non-compliance would continue to receive full regulatory compliance reviews. This gets at the essence of the differential monitoring approach, which is cost neutral. Regulatory resources may then be re-allocated from the abbreviated reviews to more in-depth full regulatory compliance reviews.

7. Based on the use of the key indicator and risk assessment methodologies within a differential monitoring approach, it is possible to identify over multiple jurisdictions if there are generic rules that meet the criteria of risk abatement and prediction. Such an application has occurred in the United States with the creation of early care

5. Conclusion

Regulatory compliance is relatively new in applying empirical evidence and basic scientific principles to its decision making. In the past, it had been dominated by case studies and long narrative reports that did not lend themselves to quantitative analysis. There is a need to more clearly apply empirical evidence and the scientific method to rule development. Certain assumptions, such as full regulatory compliance as a sound public policy, are lacking in empirical evidence. This treatise on a theory of regulatory compliance is provided for its heuristic value for both regulatory researchers and policymakers in rethinking some basic regulatory compliance assumptions. It is not about more or less, rules but finding the “right rules” that protect clients, predict overall regulatory compliance, and produce positive client outcomes.

6. Declaration of Conflicting Interest

The authors declare no conflicts of interest.

7. Article Information

This article was received March 14, 2019, in revised form April 11, 2019, and made available online May 9, 2019.

8. References


Child Care Health Consultation Improves Infant and Toddler Care

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ABSTRACT

Introduction: Many families enroll their infants and toddlers in early education and child care programs. The Pennsylvania Chapter of the American Academy of Pediatrics recruited 32 child care centers that care for infants and toddlers to be linked with a child care health consultant (CCHC).

Method: Project staff assigned the centers alternately to an immediate intervention or a 1-year delayed intervention (contrast) group. At entry into the project, and then 1 and 2 years later, an evaluator assessed center compliance with 13 standards for infants and toddler care selected from Caring for Our Children: National Health and Safety Performance Standards (3rd ed.). Project staff linked the Immediate Intervention centers with a CCHC in Year 1. In Year 2, in a crossover comparison, project staff linked Contrast centers with a CCHC.


KEY WORDS
Child care, child care health consultation, health and safety, infants and toddlers

INTRODUCTION
Nationally, about 48% of children younger than 3 years of age are enrolled in organized child care facilities (Laughlin, 2013). Early educators (child care staff) care for these children for many hours and many days. The quality of their care has lifelong impact on their physical, developmental, and social–emotional well-being (Garcia, Heckman, Leaf, & Padros, 2016).

In 2013, the Early Childhood Education Linkage System (ECELS), a program of the Pennsylvania (PA) Chapter of the American Academy of Pediatrics (AAP)
received a 3-year grant from the Maternal and Child Health Bureau (MCHB). The purpose of the grant was to "improve state infant/toddler [I/T] child care quality initiatives (Quality Rating and Improvement Systems [QRIS] and professional development) ..." MCHB's grant required selection and promotion of 10 or more standards from a list provided by MCHB from Caring for Our Children: National Health and Safety Performance Standards, Guidelines for Early Care and Education Programs, 3rd ed. (CFOC3; AAP, American Public Health Association, & National Resource Center for Health and Safety in Child Care and Early Education, 2011).

Child care programs in PA's QRIS, called Keystone STARS, are ranked from the entry level at STAR 1 to STAR 4. To earn a rating, programs must comply with state regulations and meet the requirements listed for the designated STAR level on the PA Key Web site (www.pakeys.org). For a STAR 4 rating, a center that serves infants and toddlers must have scores at or above 5 (good) on the seven subscales of the Infant and Toddler Environment Rating Scale—Revised Edition (ITERS-R; Harms, Cryer, & Clifford, 2006). The Personal Care Routines subscale of the ITERS-R has some health and safety items. Scores in this subscale and on health and safety items in some of the other subscales are among the lowest scoring ITERS-R items in PA and elsewhere. This finding is reported by the PA Key Program Quality Assessment Team (2016) and by the authors of the ITERS-R (Harms and Cryer, personal communication, 2014).

Child care health consultants (CCHCs) use observation, education, collaborative decision making, coaching, and mentoring to achieve quality improvement in the QRIS (Zaslow, Tout, & Halle, 2012). CCHCs base their work on needs and feasible implementation. For more than a decade, published research has confirmed that child care health consultation is an effective approach to improving health and safety compliance with national child care standards (Alkon & Bernzweig, 2008; Alkon et al., 2008; Alkon, Bernzweig, Kim, Wolff, & Mackie, 2009; Alkon et al., 2014; Alkon et al., n.d.; Alkon, Sokal-Gutierrez, & Wolf, 2002; Banghart & Kraeder, 2012; Carabin et al., 1999; Crowley, 2006; Isbell et al., 2013; Moon & Oden, 2005; Organizational Research Services & Geo Education and Research, 2007; Pacific Research and Evaluation, 2007, 2008; Ramler, Nakatsukasa-Ono, Loe, & Harris, 2006; Roberts et al., 2000a, 2000b). Most of these studies did not specifically target care for infants and toddlers.

Published studies document the following specific improvements associated with involvement of a CCHC. Sanitation and hygiene reduced respiratory and gastrointestinal illness and days absent for illness among young children in group care (Carabin et al., 1999; Kotch et al., 2007; Roberts et al., 2000a, 2000b). Nationally recommended practices related to active play, nutrition, and food handling were adopted (Alkon et al., 2014). Policies and procedures accompanied by staff training reduced hazards and injuries (Kotch, 2002; Organizational Research Services & Geo Education and Research, 2007). Training about safe infant sleep positioning and the infant sleep environment reduced risk of sudden infant death syndrome (Moon & Oden, 2005). Better monitoring and tracking of immunization data in child care programs was associated with more children having up-to-date vaccine documentation (Alkon & Bernzweig, 2008).

The PA AAP established ECELS in 1989. ECELS maintains a CCHC Registry and regularly communicates with registered CCHCs to provide professional development, technical assistance, and tools to enable their implementation of the CCHC role. PA's CCHCs include private and public health service providers and health professionals who teach in academic settings. Funding for CCHC work is unpredictable, making recruitment, education, and retention of CCHCs challenging.

PA's child care regulations require that child care providers have documents showing that enrolled children are up to date with preventive health services recommended by the AAP, including "a review of the child's immunized status according to recommendations of the ACIP [Advisory Committee on Immunization Practices]" (PA Department of Human Services, 2008). This regulation is not enforced. Few providers use any reliable way to ensure that enrolled children are up to date. ECELS encourages child care centers to use a well-tested and routinely updated online software application called WellCareTracker™ (Weinburg, 2002) to check child health records for up-to-date routine preventive health services. It is described, demonstrated, and offered for subscription at www.wellcaretracker.org. Using WellCareTracker™ eases the burden for child care providers to comply with the regulation and remind families to obtain these services in a timely manner.

METHODS
Design
The PA AAP's MCHB-funded Infant-Toddler Quality Improvement Project (ITQIP) was conducted by ECELS using a randomly assigned clinical trial with a crossover comparison of centers assigned to an immediate intervention or delayed intervention (comparison) group. ECELS (a) assessed child care center practices related to I/T care for 13 selected CFOC3 standards (AAP et al., 2011) and (b) assessed whether compliance with these practices improved when centers were linked with a CCHC.
Selection of the CFOC3 standards addressed in ITQIP

With input from early care and education stakeholders, ECELS chose 13 CFOC3 standards (AAP et al., 2011) from a list provided by MCHB (Box 1). The selection criteria were that the standard is (a) associated with the highest and most common risks of harm to I/T (AAP, American Public Health Association, & National Resource Center for Health and Safety in Child Care and Early Education, 2013), (b) measurable and amenable to improvement with technical assistance and professional development provided by a CCHC over a 12-month period, and (c) found by state inspectors to have a high level of noncompliance according to state data (PA Office of Child Development and Early Learning, 2010).

Evaluation plan

The evaluation plan is a classic randomly assigned crossover clinical trial. See Figure 1 for the evaluation plan logic model.

The ITQIP staff and consultants developed the evaluation tool described below. The ITQIP Project Coordinator (first author) and the evaluators collected data from participating centers at three points: when centers enrolled in the study (Pretest) and then 1 year (Posttest 1) and 2 years later (Posttest 2). One of the consultants (fourth author) compared the two groups on the pretest for equivalency and then on each of the two posttests. These data are discussed in the Results: Immediate Intervention Versus Delayed Intervention (Contrast) Group section.

One year after the pretest data were collected, the participating centers were switched to a crossover comparison format. At this point, ITQIP ended the subsidy for the CCHCs who were working with the centers in the immediate intervention group and provided the subsidized CCHC linkage to the centers in the delayed intervention (contrast) group.

When a center enrolled in ITQIP, the ITQIP coordinator interviewed the center director by phone. She gathered demographic data, including the number of enrolled I/Ts, where and when I/T activities occurred in the center, and the number of children who met the MCHB definition of special health needs. She asked the director to submit up to five of any care plans the center had for these children, redacted for confidentiality. The MCHB definition of a child with special health care needs is noted in CFOC3 standard 3.5.0.1 as “a child who has or is at increased risk for chronic physical, developmental, behavioral or emotional conditions and who requires health and related services of a type or amount beyond that required by children generally” (AAP et al., 2011).

The ITQIP coordinator selected the rooms for the evaluator to observe as those with the largest number of children in the age group. The evaluators recorded observations in one infant and one toddler room at each center.

The evaluator collected a random sample of immunization records for up to 10 infants and 10 toddlers with the names redacted for confidentiality. The ITQIP coordinator used WellCareTracker™ software to check these immunization records. The ITQIP coordinator evaluated the care plans that the director submitted for the presence of the appropriate components from the list of the 14 components specified in CFOC3 standard 3.5.0.1. (AAP et al., 2011) and a 15th component, the presence of the health care provider’s signature, that is required by PA regulations (Box 2).

### BOX 1. CFOC3 standards chosen for ITQIP

1.4.5.2 Child Abuse and Neglect Education  
3.4.4.1 Recognizing and Reporting Suspected Child Abuse, Neglect, and Exploitation  
2.1.2.1 Personal Caregiver/Teacher Relationships for Infants and Toddlers  
2.2.0.2 Limiting Infant/Toddler Time in Crib, High Chair, Car Seat, and other restraining equipment  
3.1.3.1 Active Opportunities for Physical Activity  
3.1.4.1 Safe Sleep Practices and SIDS Risk Reduction  
3.2.1.4 Diaper Changing Procedure  
3.2.2.1 Situations That Require Hand Hygiene  
3.2.2.2 Handwashing Procedure  
3.6.3.3 Training of Caregivers/Teachers to Administer Medication  
3.5.0.1 Care Plan for Children with Special Health Care Needs  
5.4.5.2 Cribs  
7.2.0.1 Immunization Documentation  
Note. CFOC3, Caring for Our Children: National Health and Safety Performance Standards; Guidelines for Early Care and Education Programs (3rd ed.); ITQIP, Infant-Toddler Quality Improvement Project; SIDS, sudden infant death syndrome.
The ITQIP coordinator scored the evaluator’s observations of diapering, hand hygiene, and medication administration. She promptly prepared a summary of all the findings for the center and sent the summary to the center director and the linked CCHC before the first CCHC site visit. The summary delineated areas of strengths and areas to improve based on the evaluation tool results. To facilitate use of the data by the center staff and CCHCs, the summary included the text of the evaluation tool item, the center’s score on the item, and the reason why the center met or did not meet the standard. The CCHC contacted the center within 2 weeks after receiving the summary to set up the initial site visit.

Evaluation Tool
The ITQIP staff prepared the items on the evaluation tool from performance guidelines specified in the 13 selected CFOC3 standards (AAP et al., 2011). ITQIP consultants (fourth and fifth authors) and the ECELS staff reviewed the tool for clarity and validity of content. After several rounds of revisions, the ITQIP coordinator and a prospective ITQIP evaluator field-tested the tool, further revised it, and then field-tested it again, this time testing for interrater reliability with two evaluators independently and simultaneously using the tool.

The ITQIP evaluation tool has four sections: (a) Demographic Information collected in the phone interview (35 items), (b) Observations (64 items), (c) Interview Questions (28 items), and (d) Documents (14 items). The score awarded to items on the evaluation tool was based on the criteria listed in Box 3. A score of 2 or 3 for an item was considered a strength, and a score of 0 or 1 for an item was considered an area to improve. This total score was the sum of the scores for each item. The total number of scorable items on the evaluation tool is 106, with a maximum score of 318. The documents assessed include training records, written policies, care plans for children with special needs, immunization data, and PA child abuse clearances.

ITQIP assigned each scorable item to one of the 10 topic areas addressed by the 13 CFOC3 standards selected for the project (AAP et al., 2011). See Table 1.

Sampling design: Recruitment, random assignment, and retention of centers
ECELS recruited Keystone STAR 2 and STAR 3 centers by distributing a flyer about the project. Programs with higher STARS ratings qualify for higher payments for children whose care is state subsidized. The highest payments are for children enrolled in STAR 4 centers. The increased payment for a higher rating is a quality improvement incentive. Also, ECELS offered participating centers three free $10 credit-awarding reviews for ECELS self-learning modules. The flyer was included in the newsletters of a variety of organizations: four of the five regional state-supported sources of professional development (Regional Keys), the PA Child Care Association, the Pittsburgh Association for the Education of Young Children, and United Way. Because the northwestern region of the state has the fewest centers, recruitment from that region was not attempted.

As the centers joined ITQIP, the project coordinator assigned them alternately to one of two groups, either the immediate intervention group or the delayed intervention (contrast) group. ITQIP enrolled centers from all four targeted regions of the state.

BOX 2. Care plan components evaluated for children with special needs

| 1. A list of the child’s diagnoses |
| 2. Contact information for the child’s health care provider and any subspecialists |
| 3. Medications to be administered on a scheduled basis |
| 4. Medications to be administered in an emergency with clearly stated signs and symptoms in lay language about when to give the medication |
| 5. Procedures to be performed while in care |
| 6. Allergies |
| 7. Diet modification that the child requires |
| 8. Activity modifications |
| 9. Environmental modifications |
| 10. Triggers that cause a reaction to avoid |
| 11. Symptoms for caregivers/teachers to observe |
| 12. Behavioral modifications beyond those needed for a typically developing child |
| 13. Emergency response plans for a facility emergency and if the child has an emergency event |
| 14. Special skills training and education required and provided for the staff |
| 15. Health care provider signature (required by Pennsylvania regulation) |

Note. Fourteen components specified in the Caring for Our Children: National Health and Safety Performance Standards; Guidelines for Early Care and Education Programs (3rd ed.) standard 3.5.0.1. (American Academy of Pediatrics et al., 2011) and a 15th required by Pennsylvania child care regulation.

BOX 3. Criteria for scores assigned to items on the evaluation tool

0 = Never meets item
1 = Partly (<50%) meets item
2 = Mostly (≥50%) meets item
3 = Fully (100%) meets the item
NA = Not Applicable
NOp = Not observed or no opportunity to obtain data
DK = Don’t know (interviewee response)
Centers enrolled in ITQIP agreed to:

- allow a 4- to 5-hour site evaluation once a year for 3 years,
- work with a CCHC for a period of 1 year to improve I/T health and safety,
- accept random assignment to one of the two project groups,
- provide access to redacted immunization records and care plans for evaluation,
- pay $240.00 of the $500 honorarium ITQIP paid to their CCHC, and
- remain in ITQIP for 3 years.

Recruitment and roles of evaluators and CCHCs: Evaluators.

ITQIP recruited 17 evaluators from the list of CCHCs who had previously received CCHC training from ECELS and from the nurses in the Maternal Infant and Early Childhood Home Visiting Program. All evaluators were health professionals with pediatric experience related to observed items. Most had experience working with CFOC3 standards (AAP et al., 2011). The evaluators learned how to use the evaluation tool by participating in a live Webinar or by using the recording of the Webinar. All evaluators received a copy of the evaluation tool and a training manual with instructions for completing the evaluation. Seven evaluators were also CCHCs in this project. None of the evaluators who were CCHCs in ITQIP were linked with centers they evaluated.

The evaluators gave their completed evaluation tools to the ITQIP coordinator to score and summarize. The coordinator reviewed each submitted evaluation tool and then discussed the documentation with the evaluator by phone to make sure the scoring was as intended.

Child Care Health Consultants.

ECELS recruited 14 registered nurses and one physician as CCHCs. The ITQIP coordinator (first author) has worked as a CCHC for more than 15 years. She and the project’s director and primary investigator, a pediatrician (second author) educated, coached, mentored, and supported the work of the CCHCs. The CCHCs participated in a Webinar about the project scope and the use of the selected CFOC3 standards (AAP et al., 2011). They received a training manual that included the 13 selected CFOC3 standards (AAP et al., 2011) and resources to support best practice in each of the 10 topic areas. ITQIP provided additional resources and periodic CFOC3 updates (AAP et al., 2011).

During the site visit, the CCHC compared her observations with those in the summary and solicited concerns about health and safety practices from the center’s staff. Then the director, program staff, and CCHC chose three of the 10 topics as the primary focus of the center’s improvement. The CCHC helped the center staff prepare an action plan to work on the three topic areas they chose. Action plans included filling gaps in knowledge, developing policies for staff and family handbooks, and improving staff practices. The CCHCs and center directors arranged all subsequent contacts and visits over the next 12 months.

Quarterly, the CCHCs sent the ITQIP coordinator documentation of their work and progress toward goals. The CCHCs submitted the center’s initial action plan and a final action plan at the end of the year that showed what the center accomplished. ITQIP paid $250 to the CCHCs upon receipt of the center’s initial action plan and date of the first CCHC visit. ITQIP paid the CCHCs an additional $250 after they submitted the final action plan from their 12-month linkage. Throughout the project, the ITQIP coordinator reviewed quarterly encounter forms that the CCHCs submitted to describe their work with the centers. This enabled the ITQIP coordinator to suggest ways to promote progress on action plans, including use of relevant health and safety resources.

RESULTS

Descriptive Report

ITQIP linked CCHCs with 32 centers. Of these, 16 centers were in the immediate CCHC-linked group, and 16 were in the delayed CCHC-linked group. In all,

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TABLE 1. Topic areas and number of items to score per topic

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Topic areas</th>
<th>Number of items to score per topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>CA</td>
<td>Preventing Child Abuse</td>
<td>13</td>
</tr>
<tr>
<td>PR</td>
<td>Personal Relationships</td>
<td>9</td>
</tr>
<tr>
<td>LA</td>
<td>Limited Physical Activity of Infants</td>
<td>3</td>
</tr>
<tr>
<td>AO</td>
<td>Active Opportunity for Physical Activity</td>
<td>22</td>
</tr>
<tr>
<td>SS</td>
<td>Safe Sleep Practices/SIDS Prevention</td>
<td>19</td>
</tr>
<tr>
<td>MA</td>
<td>Medication Administration</td>
<td>8</td>
</tr>
<tr>
<td>DC</td>
<td>Diaper Changing Procedure</td>
<td>16</td>
</tr>
<tr>
<td>HH</td>
<td>Hand Hygiene</td>
<td>8</td>
</tr>
<tr>
<td>IM</td>
<td>Immunization</td>
<td>3</td>
</tr>
<tr>
<td>SN</td>
<td>Care Plans for Children With Special Needs</td>
<td>5</td>
</tr>
</tbody>
</table>

Note. SIDS, sudden infant death syndrome. See the narrative for an item-by-item explanation of those items with significance levels (p values) based on the t tests performed on each item.
59 directors, 3,481/T teachers and 1,490 infants and toddlers were directly involved in ITQIP. Three centers from each group dropped out, leaving 13 centers in each group at the completion of the project (Table 2).

Over the 1-year period of CCHC linkage, 12 of the 32 programs had turnovers of two to four directors. This change in center leadership made the CCHCs’ work to improve I/T care very difficult. For the immediate intervention group, three of the original 16 centers withdrew from the project. One center in the delayed intervention (contrast) group closed during the project period; two others withdrew from ITQIP. Some centers dropped out because they were so overwhelmed with maintaining ratios in classrooms and staffing issues that they believed they could not focus on their action plans.

This report compares pretest, Posttest 1 and Posttest 2 scores for the 13 immediate intervention sites and 13 delayed intervention (contrast) sites that remained enrolled in ITQIP for the full 3 years.

ITQIP did not require a specific time spent in the CCHC role for each linkage. The CCHCs in the immediate intervention group provided an average of 14 hours of consultation per site (range = 2.25–28.75 hours). The CCHCs in the delayed intervention (contrast) group provided an average of 12.5 hours of consultation per site (range = 2–32 hours). The CCHCs completed quarterly encounter forms to report the total hours of services to their linked center, including a checklist of onsite, phone, and e-mail services. The most common CCHC interactions with centers included providing health education for the director and staff, onsite consultation at the facility, technical assistance by phone or e-mail, providing print or audiovisual materials, helping the facility comply with state regulations, and developing health policies and procedures.

Topics chosen by the centers in the immediate intervention group and the delayed intervention (contrast) group and the number of centers that chose each topic are shown in Table 3.

Quantitative Comparison of Evaluation Tool Scores on the Pretest Versus the Two Posttests

The scores used in the quantitative comparisons are the sum of all scores on the Evaluation Tool, not only those for the topics that the center chose for special focus (Table 4).

Immediate intervention group

On the pretest, the range in scores was 175 to 267, with an average score of 212 out of a possible 318 points (66%). On Posttest 1, the range in scores was 213 to 297, with an average score of 254 out of a possible 318 points (79%). This change from the pretest to Posttest 1 was statistically significant (t = −4.62, p < .0001). Postest2 did not show any significant change from the average score on Posttest 1, showing that the initial results from the intervention were sustained in the next year (254 to 254).

Delayed intervention (contrast) group

On the pretest, the range in scores was 164 to 271, with an average score of 218 out of a possible 318 points (68%). On Posttest1, the range in scores was 149 to 257, with an average score of 221 out of a possible 318 points (69%). These changes from the pretest to Posttest 1 were not significant. Posttest2 showed significant change in the average score from Posttest 1 (221 points) to Posttest 2 (243 points; t = −1.80, p < .08) a year after this delayed intervention (contrast) group had received their CCHC linkage.

Immediate Intervention Versus Delayed Intervention (Contrast) Groups

The comparison of the average scores between the Immediate Intervention (212) and Delayed Intervention (Contrast, 218) groups on the pretest was not significant, showing that the groups were equivalent. The difference between the average scores of the immediate intervention (254) and delayed intervention (contrast, 221) groups on Posttest1 was statistically significant (t = −3.46, p < .002), showing the effectiveness of the CCHC intervention for the immediate intervention group. Posttest2 showed no significant difference between the change in the average postintervention scores for the immediate intervention group 12 months after their CCHC-subsidized linkage and the delayed intervention (contrast) group (254 vs. 243) at the end of their 12 months of CCHC-subsidized linkage. See Figure 2 for the crossover comparison results.

<table>
<thead>
<tr>
<th>Region of Pennsylvania</th>
<th>Immediate intervention group</th>
<th>Delayed intervention group</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Centers recruited</td>
<td>Centers dropped out</td>
</tr>
<tr>
<td>Southwest Region (Pittsburgh metropolitan area)</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>South Central Region (Harrisburg metropolitan area)</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>Northeast Region (Allentown/Bethlehem/Scranton)</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>Southeast Region (Philadelphia metropolitan area)</td>
<td>8</td>
<td>2</td>
</tr>
<tr>
<td>Total</td>
<td>16</td>
<td>3</td>
</tr>
</tbody>
</table>

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The crossover comparison results (Figure 2) show the relationship between the immediate intervention and the delayed intervention (contrast) groups in a crossover design. It clearly shows how effective the intervention (pretest to Posttest 1) was for the immediate intervention group and that the effects persisted after 1 year without a subsidized CCHC linkage (Posttest 1 to Posttest 2). It also shows that the intervention was effective when the delayed intervention (contrast) group was switched to receive the CCHC intervention with targeted training, technical assistance, and collaborative consultation a year after their pretest assessment (Posttest 1 to Posttest 2).

For the Immediate Intervention Group After 1 Year of Linkage With a CCHC
Among the items in each topic area (Table 1), the following items showed statistically significant improvement (pretest to Posttest 1).

Medication administration
The director had documentation that the staff who are authorized to give medications have received medication administration training within the year from a health professional ($p < .001$).

Safe sleep
The number of written safe sleep policies containing the required elements increased ($p < .05$). Teachers ($p < .01$) and parents ($p < .05$) reviewed the safe sleep policies and were educated about safe sleep practices ($p < .05$).

Child abuse
Child abuse policies contained the required elements ($p < .05$). Both infant and toddler teachers were educated about child abuse and how, as mandated reporters, they are required to personally report incidents they suspect might involve child maltreatment ($p < .001$). The number of centers having required clearance documents on file for teachers increased ($p < .05$).

Active opportunities for physical activity
Infants (birth through 12 months of age) were taken outside two to three times per day, as tolerated ($p < .05$). Toddlers (12 months through 3 years)

<table>
<thead>
<tr>
<th>Table 3. CFOC3 topics chosen by centers by intervention group</th>
</tr>
</thead>
<tbody>
<tr>
<td>CFOC3 topics</td>
</tr>
<tr>
<td>Safe Sleep Practice</td>
</tr>
<tr>
<td>Medication Administration</td>
</tr>
<tr>
<td>Child Abuse Prevention</td>
</tr>
<tr>
<td>Care Plans for Children with Special Needs</td>
</tr>
<tr>
<td>Diaper Changing Procedure</td>
</tr>
<tr>
<td>Limited Physical Activity of Infants</td>
</tr>
<tr>
<td>Hand Hygiene</td>
</tr>
<tr>
<td>Immunization</td>
</tr>
<tr>
<td>Personal Relationships</td>
</tr>
<tr>
<td>Active Opportunity for Physical Activity</td>
</tr>
<tr>
<td><strong>Note.</strong> CFOC3, Caring for Our Children: National Health and Safety Performance Standards; Guidelines for Early Care and Education Programs (3rd ed.).**</td>
</tr>
</tbody>
</table>

<p>| Table 4. Quantitative results of the evaluation from the pretest to two posttests |
|---------------------------------------|------------------|-----------------|------------------|------------------|
| <strong>Intervention group</strong>                | <strong>Delayed intervention (contrast) group</strong> |</p>
<table>
<thead>
<tr>
<th>Range</th>
<th>Average</th>
<th>%</th>
<th>Possible total</th>
<th>Range</th>
<th>Average</th>
<th>%</th>
<th>Possible total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pretest</td>
<td>175–267</td>
<td>212$^a$</td>
<td>66</td>
<td>318</td>
<td>164–271</td>
<td>218</td>
<td>68</td>
</tr>
<tr>
<td>Posttest 1</td>
<td>213–297</td>
<td>254$^b,c$</td>
<td>79</td>
<td>318</td>
<td>149–257</td>
<td>221$^b,c$</td>
<td>69</td>
</tr>
<tr>
<td>Posttest 2</td>
<td>137–286</td>
<td>254</td>
<td>79</td>
<td>318</td>
<td>170–283</td>
<td>243$^c$</td>
<td>76</td>
</tr>
<tr>
<td><strong>Note.</strong> CCHC, child care health consultant.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$^aStatistically significant change (t = −4.62, p &lt; .0001) from pretest to Posttest 1 for the immediate intervention group.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$^bStatistically significant change (t = −4.18, p &lt; .001) from Posttest 1 to Posttest 2 for the delayed intervention group.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$^cStatistically significant change (t = −3.46; p &lt; .002) for Posttest 1 between the immediate intervention group and the delayed intervention (contrast) group.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
went outside except in weather that poses a significant health risk \( (p < .05) \).

**Diaper changing**
Before the beginning of the diaper change, changing table paper was placed over the diapering surface, followed by the gathering of supplies needed for the diaper change from the containers in which they are stored and use of gloves \( (p < .05) \).

**Hand hygiene**
Observed times when toddlers \( (p < .01) \) and the toddler teachers/caregivers \( (p < .05) \) should have washed their hands showed statistically significant improvement after CCHC linkage.

**For the Delayed Intervention (Contrast) Group After 1 Year of Linkage With a CCHC**
Among the items in each topic area (Table 1), the following items showed statistically significant improvement (Posttest 1 to Posttest 2).

**Safe sleep**
Safe sleep policies that contained all the elements that should be in a safe sleep policy per *CFOC3* standard 3.1.4.1. \( (p < .05; \text{AAP et al., 2011}) \). The facility had documentation that parents reviewed the center’s safe sleep policy and were educated about safe sleep practices \( (p < .05) \). There was no soft or loose bedding or other objects in a crib when an infant was in the crib \( (p < .05) \). Caregivers and teachers checked on sleeping infants often enough (about every 5 minutes) to be sure that the infant was still breathing \( (p < .05) \).

**Medication administration**
The name of a child to receive medication was verified before the medication was administered to that child \( (p < .05) \).

**Diaper changing**
Bottom clothing was removed, including shoes and socks, if feet were unlikely to be kept from contacting soiled skin or surfaces. If clothing was soiled, it was removed and placed in a plastic bag \( (p < .05) \).

**Special needs**
The number of care plans submitted that included the required elements in a care plan for children with special needs per the *CFOC3* standard 3.5.0.1 increased \( (p < .05; \text{AAP et al., 2011}) \).

**Additional Findings of Interest**

**Immunization documentation**
Only one center chose to work on documentation of up-to-date immunization status as an action plan focus. Overall, the immunization data for the two groups showed low compliance with *CFOC3* standard 7.2.0.1 \( (p < .05; \text{AAP et al., 2011}) \) and PA's immunization regulations (PA Department of Human Services, 2008). On the pretest, in the immediate intervention centers, 22% of the immunization records for infants and 43% of the immunization records for toddlers were up to date.
Little change occurred for this group on Posttest 1 (36% for infants, 43% for toddlers.) On the pretest for the delayed intervention (contrast) centers, 25% of the immunization records for infants and 40% of the immunizations records for toddlers were up to date. On Posttest 1 the delayed intervention (contrast) centers improved from 25% to 38% for infants but dropped from 40% to 27% of the records for toddlers showing up-to-date vaccines.

Care plans for children with special needs
The data for the two groups showed low compliance with CFOC3 standard 3.5.0.1 (AAP et al., 2011) that lists the components for care plans. Combining the immediate intervention and delayed intervention (contrast) center findings for this topic, the pretest showed that 66 I/Ts were identified with special health care needs in the 32 centers initially enrolled in ITQIP. Only 15 (23%) of I/Ts with identified special health care needs had any care plan signed by a health care professional. Only 1 of 66 I/Ts with special health care needs had a care plan signed by a health care professional that had all necessary components for optimal daily and/or emergency care. Posttest 2 showed that 39 I/Ts were identified with a special health care need in the remaining 26 centers. For children identified by the centers as having a special health care need, 62% did not have a care plan. Fifteen (38%) of those with identified special health care needs had a care plan signed by a health professional. Four of the 15 care plans had all the required elements. Examples of children who had special needs and had no care plan signed by a health care provider included children with gastroesophageal reflux taking Ranitidine, febrile seizures, asthma, multiple epinephrine autoinjectors onsite, autism, nonfebrile seizures, and torticollis and plagiocephaly, which required that the child wear a helmet each day.

DISCUSSION AND CONCLUSIONS
Quality early education and child care have been shown to be associated with lifelong benefits (Garcia et al., 2016). Young children are especially vulnerable to infectious diseases and injuries because of their age-appropriate behavior and abilities, their immature immune systems, and their lack of understanding of risk. Maintaining safe and healthful environments and practices involves removal of hazards and provision of policies and procedures, as well as compliance with quality standards by everyone in the group.

Numerous studies have shown the effectiveness of child care health consultation. This study focused on I/T care. The immediate intervention group showed significant improvement in policy development for safe sleep and child abuse and in education about safe sleep practices, preventing child abuse, and medication administration training. Some improvement in diaper changing and hand hygiene procedures occurred. The delayed intervention (contract) group showed significant improvement in safe sleep procedures, policies and education, medication administration procedure, diaper changing procedures, and care plans for children with special needs with appropriate information and signed by a health care provider.

The data collected by ITQIP show that many children with special needs lacked appropriate care plans. After finding little improvement in the immediate intervention group for centers having care plans with needed elements, ITQIP chose this topic as the focus of an MCHB-required continuous quality improvement initiative. ITQIP provided an audioconference for the CCHCs and gave them resources for teaching what should be in a care plan. CCHCs reported that they were most successful at helping the centers have complete, useful care plans for children with disease-specific conditions.

The areas chosen to target varied from center to center. Immunization was chosen by only one center. At the time of the study, neither regulation inspectors nor quality rating assessors were checking whether the center had documentation that the enrolled children were up to date with their vaccines. With little incentive or sanctions, documentation of up-to-date immunization status was poor.

Improvements occurred in some practices specified in selected CFOC3 standards. Many of the directors said they appreciated the help they received from the CCHCs that ITQIP linked with their centers. The director of one center, part of a corporation with centers in 12 states, advocated for improving sleep policies for all the centers in her company. This advocacy could lead to widespread improvement.

The centers that participated in this project were STAR 2 and STAR 3 programs that responded to an invitation to participate in ITQIP to improve. They were willing to contribute a modest copayment to work with a CCHC and wanted to raise their STAR rating and consequent higher payments for subsidized enrollees.
This selection bias is likely to have influenced the observed improvements.

A limitation of the study is the small sample size due to limited funding for the project. Also, although the study assessed practices for 13 CFOC3 standards (AAP et al., 2011), the centers addressed only three topic areas. Little improvement was seen in topics that were not chosen or chosen less frequently. Change in leadership at the centers with varying levels of interest in working on the action plans made improvement difficult.

Another limitation of the study is the variability in child care operation from one facility to another and from year to year. Evaluators were unlikely to have been evaluating the same children from pretest through Posttest 2. Different teachers/caregivers and children may occupy designated rooms in a facility. ITQIP did not require that the CCHCs spend a specific amount of time with their centers. The time and type of service provided by CCHCs varied widely. Although CCHCs reported the total time and types of services they provided, they were not asked to report the time spent in each type of service (onsite visits, phone calls, or e-mails).

CCHCs support health and safety practices and environments that prevent harm and promote health and development of children, as well as overall wellbeing for families and early education staff. Currently, only 17 U.S. states have a statutory requirement for early childhood education programs to have child care health consultation (Honigfeld, Pascoe, Macary, & Crowley, 2017). Of these, two states require CCHC involvement only if the facility cares for sick children (Honigfeld et al., 2017).

None of the centers in this project continued their relationship with their CCHC after the year of subsidized linkage. Some directors stated that although they found the CCHC very helpful and informative, the cost of the CCHC was prohibitive. Some said they would continue the CCHC on a fee basis if they could budget for it in the future. Other studies have shown that linkage of centers with CCHC improves health and safety compliance. ITQIP showed this is true for I/T programs, too.

REFERENCES


A Comparison of International Child Care and US Child Care Using the Child Care Aware – NACCRRRA (National Association of Child Care Resource and Referral Agencies) Child Care Benchmarks

Richard Fiene, Ph.D.
Affiliated Faculty
Prevention Research Center
The Pennsylvania State University

This is a first of its kind study comparing the USA to other world countries utilizing the Child Care Aware – NACCRRRA Child Care Benchmarks related to health and safety rules and regulations. A team of researchers analyzed the child care/early care & education rules and regulations from the USA and a selected group of countries to do a comparative analysis using the Child Care Aware – NACCRRRA benchmarking scoring protocol. The results from the analyses were somewhat unexpected in that the scores between the USA and the other countries were not as statistically significant in the overall scores. However, when more specific benchmarks were compared statistically significant differences did appear in the health & safety and professional development areas.

Key words: Child Care Quality, Comparisons of USA and International Child Care, Child Care Regulations.

Introduction

The purpose of this paper is to compare several countries (N =20) and the United States on the Child Care Aware – formerly NACCRRRA (National Association of Child Care Resource and Referral Agencies) Child Care Benchmarks that have used extensively in the USA to compare state regulatory and monitoring policy and implementation. The use of these benchmarks has been very useful in comparing states in the USA on an agreed upon series of child care benchmarks that have a great deal of support in the research literature (AAP/APHA, 2012, 2013; NACCRRRA 2007, 2009, 2011). Previous research (OCED, 2006) has focused on early care and education policies in other countries which was a very important
first step in making comparisons across countries. This paper will expand upon this comparison in order to begin applying the NACCRRRA benchmarks to other countries and establish a baseline between the USA and other countries related to regulatory review and analysis. This study is important because it provides a common rubric for making comparisons between the USA and other countries that is reliable and valid (NACCRRRA 2007, 2009, 2011)

**DIFFERENTIAL MONITORING LOGIC MODEL & ALGORITHM (DMLMA©) (Fiene, 2012): A 4th Generation ECPQIM – Early Childhood Program Quality Indicator Model**

CI x PQ => RA + KI => DM

**Definitions of Key Elements:**

CI = Comprehensive Licensing Tool (Health and Safety) *(Caring for Our Children)*

PQ = ECERS-R, FDCRS-R, CLASS, CDPES (Caregiver/Child Interactions/Classroom Environment)

RA = Risk Assessment, (High Risk Rules) *(Stepping Stones)*

KI = Key Indicators (Predictor Rules) *(13 Key Indicators of Quality Child Care) (NACCRRRA Benchmarks)*

DM = Differential Monitoring (How often to visit and what to review)

![Diagram](image_url)

Figure 1.
analysis and is recommended reading for anyone interested in reviewing public policy analyses.

The child care benchmarks utilized in this study are based upon the following key indicators: prevention of child abuse, immunizations, staff child ratio, group size, staff qualifications and training, supervision/discipline, fire drills, medication administration, emergency plan/contact, outdoor playground, inaccessibility of toxic substances, and proper hand washing/diapering (NACCRRA 2007, 2009, 2011). These benchmarks are more based upon the structural aspects of quality rather than on the process aspects of quality. This is an important distinction between the USA approach and the other countries approaches that becomes important in the explanation of results later in this paper.

This paper also supports and expands the development of an Early Childhood Program Quality Indicator Model (ECPQIM)(Fiene & Nixon, 1985) which is in a 4th generation (Fiene, 2013) as a differential monitoring logic model & algorithm helping to guide the program monitoring of child care/early care & education programs (see Figure 1).

Method

Data Collection Process

Data collection was done on a 100 point scale which is delineated in Appendix 1 as developed by the Child Care Aware - NACCRA Research Team. The same scoring protocol that was utilized in developing the 2007, 2009, and 2011 Reports and comparisons of states by Child Care Aware - NACCRA was employed in this study in comparing the average scores of the states and the 20 countries. The 100 point scale consisted of 10 child care benchmarks each worth 10 points: ACR = Staff child ratios NAEYC Accreditation Standards met (R1); GS = Group size NAEYC Accreditation Standards met (R2); Director = Directors have bachelor’s degree (R3); Teacher = Lead teacher has CDA or Associate degree (R4); Pre = Initial orientation training (R5); Inservice = 24 hours of ongoing training (R6); Clearance = Background check (R7); Devel = Six developmental domains (R8); Health = Health and safety recommendations (R9); and Parents = Parent Involvement (R10).

Data Scoring

The scoring protocol employed a total raw score approach of 100 points that was used to compare the countries on the 10 child care benchmarks in the aggregate. The scoring protocol also employed a standardized scoring approach (0 to 2 points) on each of the 10 child care benchmarks utilizing the following scale: 0.0 = Does not meet the Child Care Aware - NACCRA Benchmarks; 0.5 = Marginally meets the Child Care Aware - NACCRA Benchmarks; 1.0 = Partially meets the Child Care Aware - NACCRA Benchmarks; 1.5 = Substantially meets the Child Care Aware - NACCRA
Benchmarks; 2.0 = Fully meets the Child Care Aware – NACCRRA Benchmarks.

**Data Collectors**

A team of undergraduate and graduate research assistants at the Pennsylvania State University were the data collectors in which each of them reviewed the child care/early childhood rules/regulations/standards from a specific country and scored the rules/regulations/standards on the Child Care Aware – NACCRRA 100 point raw score protocol and the standardized (0 – 2) scoring approach.

**Data Sources**

The child care regulations selected were for preschool age children only in child care center setting in the 20 countries. Geographically the governmental jurisdiction closest to the national capital was used if applicable national regulations could not be found. More than the final 20 countries selected were reviewed but several countries needed to be dropped because they did not meet the above criteria or the regulations could not be found in English. This was more a convenience sample rather than a stratified scientific sample, a limitation of this study.

**Results**

The results from this study and analysis were totally unexpected. The results indicated no statistically significant differences between the USA and the other countries selected (Australia, Belgium, Norway, Finland, Sweden, Ireland, United Kingdom, Italy, France, New Zealand, Mexico, Greece, Canada, Austria, Portugal, Philippines, Turkey, Pakistan, Nigeria, Denmark, and Spain - these countries were selected because of their availability of child care/early care & education rules and regulations as described previously above in Data Sources) when comparing the total scores on the 100 point scale; the USA average for all 50 states scored 58 while the 20 countries average score was 56. However, a very different scenario occurs when looking at the ten individual child care benchmarks using the standardized 0 – 2 scoring protocol. The 20 countries selected in this study scored statistically higher on the following child care benchmarks: Director \( t = 7.100; \ p < .0001 \) and Teacher \( t = 7.632; \ p < .0001 \) qualifications. The USA scored statistically higher on the following child care benchmarks: Health/Safety \( t = 6.157; \ p < .0001 \), Staff Clearances \( t = 3.705; \ p < .01 \), and Pre-Service \( t = 4.989; \ p < .001 \) /In-Service training \( t = 2.534; \ p < .02 \) (See Table 1 & Figure 2).

The results showed that both the USA and all other countries mean scores were 58 and 56 respectively on the 100 point scale – this is a raw scale score and not the standardized score (0 – 2 – see Table 1 and Figure 2) which was used in the comparisons for each benchmark. This is not a particularly good score if you think in terms of exams, but for states and countries with
vastly complex bureaucracies maybe this isn’t as bad as it looks. Could it be that the USA is better than we think or is it that the USA and all other countries are providing just mediocre child care?!

The reason for using aggregate data in this study was to be consistent in how data have been collected in the USA utilizing the Child Care Aware – NACCRRA Scoring Protocol. This did delimit the potential analyses for this study and the recommendation would be made in future studies to unbundle the results so that more detailed comparisons could be made. As mentioned in the introduction, the purpose of this study was to provide an initial baseline comparison between the USA and other countries on the Child Care Aware – NACCRRA Scoring Protocol.

Table 1

Mean Comparisons between USA and Twenty Countries on Child Care Aware – NACCRRA Benchmarks

<table>
<thead>
<tr>
<th>Benchmark</th>
<th>Countries</th>
<th>USA</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACR (R1)</td>
<td>1.122</td>
<td>0.8462</td>
<td>not significant</td>
</tr>
<tr>
<td>GS (R2)</td>
<td>0.4063</td>
<td>0.5865</td>
<td>not significant</td>
</tr>
<tr>
<td>Director (R3)</td>
<td>1.5625</td>
<td>0.5</td>
<td>t = 7.100; p &lt; .0001</td>
</tr>
<tr>
<td>Teacher (R4)</td>
<td>1.6563</td>
<td>0.4038</td>
<td>t = 7.632; p &lt; .0001</td>
</tr>
<tr>
<td>Preservice (R5)</td>
<td>0.9375</td>
<td>1.6731</td>
<td>t = 4.989; p &lt; .001</td>
</tr>
<tr>
<td>Inservice (R6)</td>
<td>0.6563</td>
<td>1.0481</td>
<td>t = 2.534; p &lt; .02</td>
</tr>
<tr>
<td>Clearances (R7)</td>
<td>0.6094</td>
<td>1.2404</td>
<td>t = 3.705; p &lt; .01</td>
</tr>
<tr>
<td>Development (R8)</td>
<td>1.6406</td>
<td>1.4519</td>
<td>not significant</td>
</tr>
<tr>
<td>Health(R9)</td>
<td>0.9844</td>
<td>1.7404</td>
<td>t = 6.157; p &lt; .0001</td>
</tr>
<tr>
<td>Parent(R10)</td>
<td>1.5000</td>
<td>1.5385</td>
<td>not significant</td>
</tr>
</tbody>
</table>

Legend:

Child Care Aware - NACCRRA Benchmarks:

Parent = Parent Involvement (R10)
Health = Health and safety recommendations (R9)
Development = Six developmental domains (R8)
Clearances = Background check (R7)
Inservice = 24 hours of ongoing training (R6)
Preservice = Initial orientation training (R5)
Teacher = Lead teacher has CDA or Associate degree (R4)
Director = Directors have bachelor’s degree (R3)
GS = Group size NAEYC Accreditation Standards met (R2)
ACR = Staff child ratios NAEYC Accreditation Standards met (R1)

Scoring:

0.0 = Does not meet Child Care Aware – NACCRRA Benchmarks.
0.5 = Marginally meets Child Care Aware – NACCRRA Benchmarks.
1.0 = Partially meets Child Care Aware – NACCRRA Benchmarks.
1.5 = Substantially meets Child Care Aware – NACCRRA Benchmarks.
2.0 = Fully meets Child Care Aware – NACCRRA Benchmarks.
Discussion

The purpose of this study was to extend the Child Care Aware - NACCRRRA Child Care Benchmarks Scoring Protocol to an international sample comparison. As has been done by the National Science Foundation with math and science testing, these same types of comparisons have been made with the USA not fairing all that well on the math and science comparisons.

It appears that when it comes to child care benchmarks the USA actually appears to be in better shape than many advocates and experts would have thought when compared to other countries or is it that the other countries are providing the same form of mediocre care as it relates to these child care benchmarks. Remember that these benchmarks are heavily weighted towards the structural side of quality comparisons.

Legend:
Child Care Aware - NACCRRRA Benchmarks:
Parents = Parent Involvement (R10)
Health = Health and safety recommendations (R9)
Devel = Six developmental domains (R8)
Clearance = Background check (R7)
Inservice = 24 hours of ongoing training (R6)
Pre = Initial orientation training (R5)
Teacher = Lead teacher has CDA or Associate degree (R4)
Director = Directors have bachelor’s degree (R3)
GS = Group size NAEC Accreditation Standards met (R2)
ACR = Staff child ratios NAEC Accreditation Standards met (R1)

Scoring:
0.0 = Does not meet Child Care Aware – NACCRRRA Benchmarks.
0.5 = Marginally meets Child Care Aware – NACCRRRA Benchmarks.
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1.5 = Substantially meets Child Care Aware – NACCRRRA Benchmarks.
2.0 = Fully meets Child Care Aware – NACCRRRA Benchmarks.

![Figure 1. Mean Comparisons between USA and Twenty Countries on Child Care Aware – NACCRRRA Benchmarks](image-url)
rather than the process side of quality. However, when the individual benchmarks are analyzed then certain patterns occur which seem very consistent with the previous research literature. The 20 countries scored higher on the staffing benchmarks while the USA scored higher on the training and health/safety benchmarks. Clearly this is an indication reflecting public policy in the other countries as versus the USA. Many other countries place more emphasis on the process aspects of quality which involve staff and staff interactions with children. The USA has focused more on the structural aspects of quality which involve health & safety especially in the state licensing of child care. These structural aspects of quality are more easily quantifiable in state rules and regulations which is the locus of control for the licensing of child care. Since the USA does not have national standards that are required (the USA does have national health and safety standards that are recommended practice, such as Caring for Our Children (2012)) as is the case in so many of the countries in this study, this may provide a possible explanation for the results of this study. It will be interesting to see how Quality Rating and Improvement Systems (QRIS) which usually have some process standards impact this overall balance of structural and process aspects of quality. This is an area that needs additional research and more in-depth analysis.

So what does this tell us. I think it is a warning call as has been put forth by Child Care Aware - NACCRA that we still have a lot of additional work to do in improving child care, not only in the USA, but worldwide. Just as the Child Care Aware -NACCRA Report Cards (2007, 2009, 2011) have played a role in making positive change in the child care benchmarks over time; we need to expand this reporting and change to a world wide focus. There is clearly the need to expand from the present analysis of 20 countries and the USA to other countries throughout the world and to track changes over time as Child Care Aware/NACCRA has done.

Another area of concern within the USA and I am sure in other countries as economies have begun their slow recovery from the economic downturn of 2008 – 2010 is to do more with less. One such approach being explored in the USA is called differential monitoring which helps to re-allocate limited resources in a more cost effective and efficient manner via a risk assessment and key indicator approach. I hope that this comparison utilizing the Child Care Aware - NACCRA Benchmarking Scoring Protocol and introducing the Early Childhood Program Quality Indicator Model/Differential Monitoring Logic Model and Algorithm (Fiene, 2013) within an international context as first steps in making that happen.
References


Notes

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1 In the licensing literature these child care benchmarks are usually referred to as key indicators (Fiene, 2013). Please see Figure 1 which delineates where within a program monitoring system these benchmarks would appear and could be utilized.

2 The following individuals played key data collection roles as research assistants in the compilation of this study: Melissa Cave, Ashley Le, Breanna Green, Corrie Podschlne, Sherrie Laporta, Ashley Edwards, Laura Hartranft, Gissell Reyes, Janet Lazur, Kayma Freeman, Jessica White, Karen Mapp, and Lindsay Bitler.
Appendix 1

Benchmark criteria for *We Can Do Better: NACCRRRA Ranking of State Child Care Center Regulations: 2011 Update* were developed by Child Care Aware - NACCRRRA and have been used for the 2007, 2009 and 2011 *We Can Do Better* reports. The rationale for each standard, including research evidence of its importance in quality care, is noted in each section of the report and in previous reports. Each of the 10 regulation benchmarks were scored with a value ranging from one to 10 points, depending on how closely the state met the benchmark, for a maximum total of 100 points. In cases where states permit several different options for complying (e.g., complying with director or teacher qualifications), the minimum allowed was used. This information was used to generate state sheets with scores for each standard.

<table>
<thead>
<tr>
<th>Question</th>
<th>Scoring method</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Regulation 1.</strong> Staff: child ratio requirements comply with NAEYC accreditation standards.</td>
<td><strong>Number of ratios in compliance with NAEYC standards</strong>&lt;br&gt; 7 ratios</td>
</tr>
<tr>
<td></td>
<td><strong>Score</strong></td>
</tr>
<tr>
<td>6 mo</td>
<td>9 mo</td>
</tr>
<tr>
<td>1:4</td>
<td>1:4</td>
</tr>
<tr>
<td><strong>R2.</strong> Group size requirements are in compliance with NAEYC accreditation standards.</td>
<td><strong>Number of group sizes in compliance with NAEYC standards</strong>&lt;br&gt; 7 ratios</td>
</tr>
<tr>
<td></td>
<td><strong>Score</strong></td>
</tr>
<tr>
<td>6 mo</td>
<td>9 mo</td>
</tr>
<tr>
<td>8</td>
<td>8</td>
</tr>
</tbody>
</table>
### Director education requirement

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bachelor's degree in any field</td>
<td>10</td>
</tr>
<tr>
<td>College directors certification</td>
<td>7</td>
</tr>
<tr>
<td>Any associate degree</td>
<td>5</td>
</tr>
<tr>
<td>CDA</td>
<td>5</td>
</tr>
<tr>
<td>Clock hours/less than associate degree</td>
<td>2</td>
</tr>
<tr>
<td>High school or less</td>
<td>0</td>
</tr>
</tbody>
</table>

### Lead teacher education requirement

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>CDA/associate degree or better</td>
<td>10</td>
</tr>
<tr>
<td>State Credential</td>
<td>5</td>
</tr>
<tr>
<td>Clock Hours in ECE</td>
<td>2</td>
</tr>
<tr>
<td>High School/GED</td>
<td>2</td>
</tr>
<tr>
<td>Less than High School</td>
<td>0</td>
</tr>
</tbody>
</table>

### Number of areas training is required

<table>
<thead>
<tr>
<th>Number of areas</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Five areas</td>
<td>10</td>
</tr>
<tr>
<td>Four areas</td>
<td>8</td>
</tr>
<tr>
<td>Three areas</td>
<td>6</td>
</tr>
<tr>
<td>Two areas</td>
<td>4</td>
</tr>
<tr>
<td>One area</td>
<td>2</td>
</tr>
<tr>
<td>None</td>
<td>0</td>
</tr>
</tbody>
</table>

### Ongoing training ≥

<table>
<thead>
<tr>
<th>Hours</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>24 Hours</td>
<td>10</td>
</tr>
<tr>
<td>18 hours</td>
<td>7</td>
</tr>
<tr>
<td>12 hours</td>
<td>5</td>
</tr>
<tr>
<td>6 hours</td>
<td>2</td>
</tr>
<tr>
<td>None</td>
<td>0</td>
</tr>
</tbody>
</table>

### Number of Background checks completed

<table>
<thead>
<tr>
<th>Number of checks</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Five checks</td>
<td>10</td>
</tr>
<tr>
<td>Four checks</td>
<td>8</td>
</tr>
<tr>
<td>Three checks</td>
<td>6</td>
</tr>
<tr>
<td>Two checks</td>
<td>4</td>
</tr>
<tr>
<td>One check</td>
<td>2</td>
</tr>
<tr>
<td>None</td>
<td>0</td>
</tr>
</tbody>
</table>
Appendix 2

These were the countries included in these analyses: Australia, Belgium, Norway, Finland, Sweden, Ireland, United Kingdom, Italy, France, New Zealand, Mexico, Greece, Canada, Austria, Portugal, Philippines, Turkey, Pakistan, Nigeria, Denmark, Spain, and the USA which included all 50 states.
Approaches to validating child care quality rating and improvement systems (QRIS): Results from two states with similar QRIS type designs

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A R T I C L E   I N F O
Article history:
Available online xxx

Keywords:
Child care quality
QRIS
Study design
Methodology

A B S T R A C T
In recent years, child care quality rating and improvement systems (QRISs) have become an increasingly popular policy tool to improve quality in early childhood education and care (ECEC) settings and have been adopted in many localities and states. The QRIS National Learning Network reports that 40 statewide QRISs have been launched or piloted, including the District of Columbia (QRIS National Learning Network, 2014). The immediate goal of a QRIS is to raise the quality of care in early learning settings. Existing research suggests that care in higher-quality settings will improve child functioning, including school readiness (Burchinal et al., 2009; Burger, 2010; Howes et al., 2008), especially for children from lower-income families. QRIS logic models that guide these large-scale interventions focus on improving various dimensions of ECEC quality, with the ultimate goal of improving system outcomes, namely, child care program quality, training and technical assistance for child care providers, information and support for families, and, therefore, improvements to children’s cognitive, language, social, emotional, and physical development.

The perceived need for QRIS has grown out of documented gaps in quality in existing ECEC programs, especially those serving children from lower-income families (Fuller, Loeb, Kagan, & Carrol, 2004; NICHD ECCR, 2000) and the inability of the current ECEC system to promote uniformly high quality (Cochran, 2007). QRISs produce program-level quality ratings based on multi-component assessments designed to make ECEC quality transparent and easily understood to parents and other stakeholders. Most also include feedback, technical assistance, and incentives to both motivate and support providers’ efforts toward quality improvement (Tout et al., 2010). To make program quality transparent, QRISs typically rely on a multi-tiered rating system with one to five levels of program quality. Therefore, it is important that these ratings show evidence of validity, so that higher-quality programs are rated higher, and lower-quality programs are rated lower.

Recent research has documented the importance of both specificity and thresholds when testing hypotheses about child care quality impacts on children’s developmental outcomes (Burchinal, Peisner-Feinberg, Bryant, & Clifford, 2000; Burchinal, Vandergrift, Pianta, & Mashburn, 2010; Howes, Whitebook, & Phillips, 1992; NICHD ECCR, 2000, 2002). However, common global measures of classroom quality such as the Early Childhood Environment

Introduction

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Rating Scale-Revised (ECERS-R; Harms, Clifford, & Cryer, 2005) are not always significantly associated with specific child outcomes (Burchinal, Kainz, & Cat, 2011). This may be because these global quality scales do not focus enough on the particular child care quality processes most likely to bring about improved child outcomes (specificity) or they do not provide guidance for the level of quality required to produce improved child outcomes (thresholds). As states implement QRIS, they are using observational measures such as the ECERS-R, and they may also combine other quality measures such as the Classroom Assessment Scoring System (CLASS; Pianta, La Paro, & Hamre, 2008) or locally specified quality indicators. Because QRIS quality standards are often complex, including many components and measures at several quality levels, and because they vary from state to state, it is especially important for states to carefully validate their quality rating systems and match measures specifically to the stated outcome goals of the QRIS. For example, if a particular QRIS places more emphasis on the health aspects of children’s development, then the ECERS-R and CLASS would not be appropriate tools; but a tool measuring child care health indicators, such as the National Health and Safety Tool being developed by the California Child Care Health Program (Alkon, 2013) would be more appropriate.

Validity data can also enable researchers to test conclusions about whether the quality indicators embedded in QRIS standards lead to adequate quality assessment and whether the methods used to assign quality ratings are working as intended (Cizek, 2007). This paper defines operationally the concept of QRIS validity, presents four general approaches to assessing validity in the context of large-scale QRIS, and critically examines the efforts of two states, Maine and Indiana, to assess the validity of recently implemented QRIS using these approaches.

Validation of a QRIS is a developmental and multi-step process that assesses the degree to which design decisions about program quality standards and measurement strategies are resulting in accurate and meaningful quality ratings. Validation of a QRIS provides designers, administrators, and stakeholders with crucial data about how well the system is functioning. A carefully designed plan for ongoing QRIS validation creates confidence in the system and a climate that supports continuous quality improvement at both the child care provider and system levels (Zellman & Fiene, 2012).

To date, QRIS validation research efforts have been limited, for a number of reasons. First, validation is complex and involves a range of activities, which should include validating standards, measures, and rating protocols. Second, there has been little information available in the field that clarifies the importance and purpose of QRIS validation or identifies recommended strategies. Third, child care quality advocates and policy makers have been extremely busy designing and implementing these statewide systems, often with limited resources. Given these constraints, validation may seem like an abstract luxury that can wait until later. Further, in states with more mature QRISs, there may be some reluctance among stakeholders to assess the validity of an established and accepted quality improvement system. In newer state systems, policymakers may question the need for validation, given arguments recently offered in support of establishing a QRIS (Zellman & Fiene, 2012; Zellman, Brandon, Boller, & Kreader, 2011). Yet early and ongoing validation research is essential to the long term success of any system.

One challenge is that QRIS validation cannot be determined by a single study. Instead, validation should be viewed as an iterative process with several equally important goals: refining the QRIS quality standards and ratings, improving system functioning, and increasing the credibility and value of rating outcomes and the QRIS system as a whole. A carefully designed validation plan can promote the accumulation of evidence over time that will provide a sound theoretical and empirical basis for the QRIS (AERA, APA, & NCME, 1999; Kane, 2001; Zellman & Fiene, 2012). Ongoing validation activities, carried out in tandem with QRIS monitoring activities (those that examine ongoing implementation processes) and evaluation activities (those that examine specific outcomes) can help a QRIS improve throughout its development, implementation, and maturation (Lugo-Gil et al., 2011; Zellman et al., 2011).

QRIS validation research may produce three important benefits. First, validation evidence can promote increased support for the system among parents, ECEC providers, and other key stakeholders. Ratings that mirror the experiences of parents and providers can build trust and increase the overall credibility of the system. Second, a system that is measuring quality accurately and specifically should better able to target limited quality improvement resources to programs and program elements most in need of improvement. This should result in more targeted and effective supports for programs striving to offer higher-quality services. Third, validation evidence can be used to improve the efficiency of the rating process. If a QRIS is expending resources to measure a component of quality that is not making a unique contribution to a summary quality rating, is not measuring quality accurately, or is not contributing to desired program outcomes, that component can be removed or revised. For example, measures that vary little across providers, whose quality varies substantially in other ways, make little or no contribution to overall quality ratings (Zellman & Fiene, 2012).

Four approaches to validation

A comprehensive QRIS validation plan includes multiple studies that rely on different sources of information and ask different but related questions. We suggest QRIS validation research be organized around four complementary approaches: key quality concepts; quality measurement; ratings outputs; and links to child outcomes (Zellman & Fiene, 2012). Summaries of these approaches are provided in Table 1, which includes the purpose of each validation approach, the types of research that can be undertaken, the questions that are asked, and some limitations of each approach. The four approaches are also elaborated later in the paper, as we summarize results of validation research in Indiana and Maine.

In reviewing the table, and throughout this paper, we use three key QRIS terms: component, standard, and indicator. The term ‘quality component’ refers to broad quality categories used in QRIS (such as staff qualifications, family engagement, or learning environment). A ‘quality standard’ is defined as a specific feature of quality, such as specialized training in the use of developmentally appropriate curriculum or developmental assessment training within the staff qualifications component. A set of quality standards comprise each quality component. ‘Quality indicators’ are the specific metrics used for each quality standard. A given quality standard may have one or more quality indicators. An indicator related to the curriculum/assessment staff training standard may be, for example, “At least 50% of teaching staff have completed the two-course statewide training session on developmentally-appropriate curriculum.”

QRIS validation in Indiana and Maine

This section will describe efforts at QRIS validation in two states in order to explore current validation efforts using these four approaches and to identify the successes and challenges experienced in these early QRIS validation studies. In Indiana and Maine, the QRIS designs are similar, but some aspects of the states’ child care contexts, specific QRIS quality components, standards, and rating processes employed are somewhat different. Both states launched their QRIS statewide in 2008, and both systems have four quality tiers, referred to as “levels” in Indiana and “steps” in Maine, organized into a “building block” framework, meaning that child
Table 1
Four related approaches to validating a QRIS.

<table>
<thead>
<tr>
<th>Approach</th>
<th>Activities and purpose</th>
<th>Typical questions</th>
<th>Issue and limitations</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Examine the validity of key underlying</td>
<td>Assess whether basic QRIS quality components and standards are the “right” ones to</td>
<td>*Do the quality components capture the key elements of quality?</td>
<td>*Process subject to interpretation and to political pressure</td>
</tr>
<tr>
<td>concepts.</td>
<td>include by examining levels of empirical and expert support.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Examine the measurement strategy and</td>
<td>*Examine properties of key quality measures, e.g., inter-rater reliability on</td>
<td>*Is there sufficient empirical and expert support for including each standard?</td>
<td>*Limited empirical evidence available; few established links to outcomes of interest</td>
</tr>
<tr>
<td>psychometric properties of measures used to</td>
<td>observational measures, scoring of documentation, and inter-item correlations, to</td>
<td>*What is the reliability and accuracy of indicators collected using different</td>
<td>*This validation activity is especially important given that some quality component</td>
</tr>
<tr>
<td>assess quality.</td>
<td>determine if measures are psychometrically sound.</td>
<td>methods?</td>
<td>measures were likely developed in low-stakes settings and have not been examined in</td>
</tr>
<tr>
<td></td>
<td>*Examine relationships among quality measures to assess whether they function as</td>
<td>*Do quality measures perform as expected? (e.g., do expected subscales emerge?)</td>
<td>the high-stakes context of QRIS.</td>
</tr>
<tr>
<td></td>
<td>expected.</td>
<td>*Do measures of similar standards relate more closely to each other than to</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>other measures?</td>
<td></td>
</tr>
<tr>
<td>3. Assess the outputs of the rating process</td>
<td>*Examine variation and patterns of program-level ratings within and across program</td>
<td>*Do rating distributions vary by program type, e.g., center-based programs vs.</td>
<td>*Measurement error is an important issue that should be examined.</td>
</tr>
<tr>
<td></td>
<td>types, to assess if QRIS distinguishes levels of quality.</td>
<td>center-based programs?</td>
<td></td>
</tr>
<tr>
<td></td>
<td>*Examine relationship of program-level ratings to other validated quality indicators</td>
<td>*Do programs with different program-level ratings differ in meaningful ways on</td>
<td>*These validation activities depend on a reasonable level of confidence about the</td>
</tr>
<tr>
<td></td>
<td>to determine if ratings are assessing quality in expected ways.</td>
<td>alternative quality measures?</td>
<td>quality components, standards and indicators as well as the process used to designate</td>
</tr>
<tr>
<td></td>
<td>*Examine alternate cut points and combining rules to determine how well the ratings</td>
<td>*Do levels cut scores and combining rules produce expected rating distributions</td>
<td>ratings.</td>
</tr>
<tr>
<td></td>
<td>distinguish different levels of quality.</td>
<td>and meaningful distinctions among programs?</td>
<td>*Comparing QRIS measures to other measures is frequently constrained by the absence of</td>
</tr>
<tr>
<td>4. Examine how ratings are associated with</td>
<td>Examine the relationship between program-level ratings and selected child outcomes</td>
<td></td>
<td>validated alternative measures of the same constructs.</td>
</tr>
<tr>
<td>children's outcomes.</td>
<td>to determine whether higher program ratings are associated with better child</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>outcomes.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

...care providers must enter at the lowest level and meet all quality standards and indicators at each level in order to advance to the next higher level. The focus on these two states in this paper is to help illustrate the application of these four approaches to operationalizing validation in a QRIS. While the QRIS evaluations in Maine and Indiana have resulted in other kinds of information disseminated for policy makers in these states and publications for other audiences, this paper is unique in that it is only intended to focus on these four concepts of validation.

Both states partnered with university-based researchers to conduct validation research, after piloting aspects of their QRIS design. However, there are also key differences between these two states. For example, the Indiana QRIS standards were developed based on a local community-based model that was then modified by a state stakeholder committee for statewide expansion. The Maine quality standards were developed to align with program-type-specific national accreditation standards. The Maine standards were also vetted through review and comment by many stakeholders and technical assistance was provided by University researchers based on reviews of the scientific literature. Maine QRIS ratings are generated by provider self-report, then verified by state agency staff, while Indiana employs independent raters who directly assess the standards by visiting child care settings. Provider voluntary participation rates are higher among state-licensed providers in Indiana. However, Indiana also has significant numbers of license-exempt child care providers, whereas license exemption is not a prominent feature of the Maine child care system. The key features of each state QRIS are summarized in Table 2. These two states provide useful examples, because while the state child care contexts are different, they each used strategies contained in the four validation approaches discussed above and outlined in Table 1. The successes and limitations of these states’ approaches will inform future validation research on QRIS.
### Table 2

Key features of Indiana and Maine QRISs.

<table>
<thead>
<tr>
<th>QRIS feature</th>
<th>Indiana</th>
<th>Maine</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eligible child care types (participation rate)</td>
<td>Licensed centers (89%)</td>
<td>Licensed centers (68%)</td>
</tr>
<tr>
<td></td>
<td>Licensed homes (62%)</td>
<td>Licensed homes (44%)</td>
</tr>
<tr>
<td>Participation rules</td>
<td>Voluntary for all providers (Not required for CCDF participation)</td>
<td>Required for programs participating in federal</td>
</tr>
<tr>
<td>QRIS structure</td>
<td>Building Block; 4 quality levels</td>
<td>Building Block; 4 quality levels</td>
</tr>
<tr>
<td>QRIS standards (examples)</td>
<td>Level 1 – Licensed, or completes voluntary certification program</td>
<td>Step 1 – Meets all regulatory standards, in operation for more than one year, and all staff registered in Maine Roads to Quality Registry (MRTQ).</td>
</tr>
<tr>
<td>QRIS standards development process</td>
<td>Level 2 – Learning environment and materials requirements; daily literacy activities; 25% of staff have CDA or equivalent; 15 hrs. in-service training/yr.; etc.</td>
<td>Step 2 – Learning Environment/Developmentally</td>
</tr>
<tr>
<td></td>
<td>Level 3 – Written curriculum focused on whole child; provision for special needs; 50% of staff have CDA or equivalent; 20 hrs. in-service training/yr.; etc.</td>
<td>Step 3 – Documented use of Early Childhood Learning Guidelines and/or Infant-Toddler Learning Guidelines; Evidence collected at least three times per year on child’s development; etc.</td>
</tr>
<tr>
<td></td>
<td>Level 4 – National accreditation; Provide mentoring to other QRIS providers (see <a href="http://www.in.gov/carefinder/2554.html">www.in.gov/carefinder/2554.html</a>).</td>
<td>Step 4 – National accreditation; written parent involvement plan; etc. (See: <a href="https://www.main.gov/dhhs/ociq/qualityform.htm">https://www.main.gov/dhhs/ociq/qualityform.htm</a>).</td>
</tr>
<tr>
<td>QRIS rating procedure</td>
<td>Independent ratings contractor, annual site visits, using Paths to QUALITY standards checklist</td>
<td>Provider self-assessment, online system; (2) enrollment system uses linked files from state licensing and registry; and (3) verified by state agency staff.</td>
</tr>
</tbody>
</table>

### Method

**Indiana**

The Indiana QRIS is called “Paths to QUALITY™.” The validation research reported here includes a preliminary literature review and an empirical field study including a stratified random sample of 276 child care providers who had voluntarily entered the QRIS during 2008–2009, including 135 classrooms in 95 licensed child care centers, 169 licensed family child care homes, and 14 classrooms in 12 unlicensed registered child care ministry centers. Independent, on-site assessments were completed by university researchers approximately one year after QRIS entry and included: observational global quality assessments of the child care environment using the Environmental Rating Scales (ERS: ITERS-R, ECERS-R, FCCERS-R; Harms et al., 2005); observations of adult–child interaction quality (Caregiver Interaction Scale, CIS; Arnett, 1989); surveys and interviews with child care providers; and interviews with parents whose children had been placed with QRIS providers. Observers were trained to reliability level of 80% exact agreement (Kappa = .70) or higher, and maintained reliability during the study. Child development assessments were completed using standardized research-validated measures, with two randomly selected children from each participating child center classroom or family child care home. For children under three years, measures included the Mullen Scales of Early Learning (Mullen, 1995) for cognitive and language development and the Brief Infant Toddler Social Emotional Assessment (BITSEA; Briggs–Gowan & Carter, 2002) for social-emotional development. For children three to five years, the measures included the Peabody Picture Vocabulary Test (PPVT-4; Dunn & Dunn, 1997) and Woodcock–Johnson Applied Problems and Letter–Word Identification subtests (Berry, Bridges, & Zaslow, 2004) for language and cognitive development and the Social Competence and Behavior Evaluation (SCBE; LaFreniere & Dumas, 1997) for social–emotional development. (For a detailed description of the Indiana evaluation methodology, see Elicker et al., 2013; Elicker, Langill, Ruprecht, Lewsader, & Anderson, 2011.)

**Maine**

The Maine QRIS is called “Quality for ME.” The Maine validation research reported in this paper is based on a literature review of quality variables, focus group interviews with providers and parents, and a field study including a stratified random sample of 255 providers who enrolled in the QRIS in 2008 through 2011, including: 153 classrooms in 105 licensed child care centers; 113 licensed family child care homes; and 41 classrooms in 37 Head Start sites. Assessments were completed as soon as possible after a program enrolled into the QRIS, however, this varied based on the length of time required for the state agency to verify enrollment information and schedule on-site observations. Like Indiana, Maine researchers used the ERS global quality assessment scales and conducted surveys with providers and parents. Unlike Indiana, Maine did not collect any child-level outcome data. Assessors were trained to reliability annually by authors of the ERS scale and maintained a 85% inter-rater reliability during the study. (For a detailed description of the evaluation methodology, see Lahti et al., 2011.)

### Results

Results of the QRIS validation research in Indiana and Maine are presented in relation to the four approaches to validation recommended by Zellman and Fiene (2012; refer to Table 1).

**Approach 1: examine the validity of key underlying concepts**

As noted above, the quality components included in a QRIS (e.g., staff qualifications, learning environment, family engagement) essentially define how child care quality will be viewed in each state. Conceptual validation provides justification and support for these chosen elements. This first validation approach asks whether the quality components, standards, and indicators included in a QRIS are the “right” ones; that is, if together they define quality of care. Many state QRISs have adopted similar, though not identical, concepts and program quality standards (Smith, Robbins, Stagman, & Kreader, 2012).
One approach that can help to validate the underlying concepts of quality in a QRIS involves assessing the degree to which the quality components used in the QRIS ratings include standards and indicators that are based on empirical evidence that links them to desired program, family, and child outcomes. A literature review weighs the existing research evidence and on that basis provides a judgment about whether a particular quality component should be included or excluded from the QRIS. Like many validation activities, such reviews ideally would be updated from time to time to determine if revisions to the QRIS are advisable in light of new research findings. As noted in Table 1, this approach may be limited by available data. Further, available data may be subject to more than one interpretation. Politics can also play a role; supporters of particular elements, e.g., nutrition, accreditation, may want to ensure that such measures are included, regardless of the strength of the research evidence. This literature review approach of conceptual validation was a key method used in developing both Indiana’s and Maine’s QRIS quality standards.

**Indiana: examining the validity of underlying concepts**

Standards and indicators for each QRIS level in Indiana were drafted by a state committee of child care providers and stakeholders. The standards were based on an existing community-level Paths to QUALITY model, but also made accommodations for statewide use and integration into the existing state child care licensing and training/technical assistance systems. The highest level quality goal for QRIS in Indiana is national accreditation, so proposed quality standards and criteria at each QRIS level were constructed to help child care providers work toward accreditation in steps.

The Purdue University research team conducted a review of previous evaluations of the Indiana QRIS community-level pilot programs and an in-depth analysis of the proposed QRIS quality standards based on the published child development and child care literature. This literature-based analysis is summarized here. (For a full report, see Elicker, Langill, Ruprecht, & Kwon, 2007; Elicker et al., 2013.)

First, the evaluators looked at each proposed QRIS quality standard and indicator for each type of child care. Ten broad quality components were identified that encompassed all of the proposed quality indicators: regulation; teacher education/training; structural/environmental quality; process quality/interactions; assessment; provisions for children with special needs; program policies; director/owner professional development; parent–teacher communication; and national accreditation. These ten components were then used as key terms to guide an extensive search of the research literature to collect and weigh the available evidence that each component was: (1) generally considered a valid aspect of quality; and (2) empirically associated with children’s well-being or positive developmental outcomes. Based on the amount and quality of evidence, each quality component was the rated as follows: (1) some or limited evidence (one or two well-designed studies); (2) moderate evidence (3–5 well-designed studies); or (3) substantial evidence (more than five well-designed studies). The results of this analysis were reported to the state QRIS planning committee, including a conclusion that most of the proposed quality indicators had “substantial evidence” for their validity.

**Maine: examining the validity of underlying concepts**

Researchers at the University of Southern Maine worked with state agency leaders and other key stakeholders through a process that involved the use of Concept Mapping (The Concept System®, 2012). This process allows for the development of a conceptual framework that can guide planning, and in this case led to the selection of the underlying quality concepts and standards for Maine’s QRIS. Similar to what was done in Indiana, University of

Southern Maine research staff identified key quality concepts from the literature and national accreditation standards. In addition, concepts emerged from results of eight focus groups with parents and ECEC professionals across the state, including participants from various types of settings, e.g., family child care homes, after school programs, centers, etc. Statements of program quality were developed; these statements were the focus of a mapping process which involved more than twenty-four experts reviewing and rating the statements. The Concept Maps that result from this process allowed participants to visually identify which concepts of program quality were most favored by specific key stakeholder groups. In addition, the mapping software illustrated how closely related the concepts were to each other, based on reviews from the select experts. From this process, a set of components and standards was developed. The final step in selecting program quality standards involved a formal review and comment process that the state agency implemented in various locations across the state (Maine DHHS, 2008).

**Approach 2: examine measurement strategies and psychometric properties of quality measures**

A second type of validation focuses on the attributes of the individual quality measures used in the QRIS and the way these measures are combined to produce a summary rating of program quality. This approach addresses how well measures are working in the context of the QRIS. These efforts attempt to answer questions such as, “Is there evidence that a given indicator measures what it purports to measure?” “If the QRIS claims to have a specific number of dimensions, do we find those dimensions in the output data?” “Is there sufficient variance in scores on this quality indicator to justify its inclusion in the QRIS?” Addressing these issues involves an examination of the distribution of participating provider quality scores and the internal consistency of multi-item measures.

The research literature provides limited guidance concerning the most appropriate ways to combine measures of quality indicators into summary ratings (Lugo-Gil et al., 2011; Tout, Zaslowsky, Halle, & Forry, 2009; Zellman, Perlman, Le, & Setodji, 2008). Yet this process is crucial to producing meaningful overall program quality ratings, the key output of the rating assessment process. At minimum, it is important to consider whether certain elements should be treated as more important, and if so, how this can be assured in the process of combining them. If this issue is not addressed, unexamined weighting may occur anyway. For example, if measures of individual quality elements are combined without any weighting, then those measures that are longer (e.g., include more items) will count for more in a final rating.

At the time both the Maine and Indiana QRISs were being designed, in the mid-2000s, the predominant global quality measures in use in both states were the Environmental Rating Scales (ERS) (Harms et al., 2005; Harms, Cryer, & Clifford, 2006; Harms, Cryer, & Clifford, 2007). ERS use was predominant in the accreditation quality improvement efforts in both child care centers and child care homes. So there was some familiarity with the measures on the part of providers. This was an important political consideration in terms of developing and promoting the design of the QRIS. In addition, in reviewing emerging QRIS work from other states, it appeared that the ERSs were the predominant global classroom quality measure in use at that time. While ERS was influential in the design of the QRIS quality standards in both Maine and Indiana, it is important to note that the ERS are not used to determine the step or level quality ratings. Many other quality indicators are included in the QRIS standards of both states, including staff qualifications, annual staff training hours, and other indicators that help providers make progress toward the ultimate quality goal of national accreditation.
Choosing the points at which individual measures (in block design QRISs) and summary ratings are assigned to rating levels is another exercise that has received limited attention. Cut scores can be assessed in a number of ways. One relatively simple one is to use existing data to conduct a “virtual pilot” (Zellman & Karoly, 2012a) in which existing data are used and cut scores are altered and the effects are examined in terms of distributions of summary ratings across programs. A downward limit on cut scores is the need for some variation within each quality component; without it, a component provides no useful information in overall ratings. Designers may compare program distributions using different cut scores, although it is not always clear what an appropriate rating levels distribution should be. However, it is reasonable to assume that an appropriate distribution in the early phase of a QRIS would be one in which there are programs placed at all levels, with decreasing numbers of programs at each succeeding higher level.

Another validation activity might involve an assessment of the relationship of a given indicator to other indicators of quality included in the QRIS. In studies that examine measures to be included together in a QRIS, it is important to look at the degree of correlation found among these measures: ideally, measures will be moderately correlated so that each measure both contributes to an overall assessment of quality yet also provides some non-redundant program quality information (Zellman et al., 2008). Correlation patterns should make sense. For example, two measures of interaction quality should be more closely related to each other than to a measure of adult–child ratios. If such studies reveal for example that the correlation between ratios and interaction process is very high (r = .90+) this result might argue for eliminating one or the other indicator from the QRIS, as they may not be providing unique information (although some QRISs include certain quality elements to ensure that they are paid attention to for other policy related reasons, even if their psychometric properties are not ideal). To date, the Maine and Indiana validation research has not included a comparison of measures internal to the QRIS rating systems, but this is recommended in future research as the systems mature and stabilize.

Measurement error presents another potential challenge in assessing QRIS validity. Most QRISs assume that observational measures are relatively stable over time absent quality improvement efforts. This assumption is consistent with empirical evidence for at least one widely used instrument, the ERS (Clifford, 2005).

A related measurement issue concerns inter-rater reliability. In the twenty systems reviewed by Tout et al. (2010), nearly all QRISs require 80–85% agreement with a master coder (either exact agreement or agreement within one scale point) on ERS; this degree of reliability does not eliminate errors in ERS measurement (Bryant, 2010; Bryant, Burchinal, & Zaslow, 2011). For instance, two raters could be 100% reliable under a standard of 85% agreement within one scale point, but one might give a classroom a score of 3.5 and the other a score of 4.5, a difference that is large enough to affect an overall program rating (Karoly, Zellman, & Perlman, 2013). Based on the range and degree of variability in ERS quality scores at each rated level in both Maine and Indiana QRISs (see Tables 3 and 4), we recommended that program managers strive to increase the reliability of the rating process by clearly defining quality indicators and rating procedures, and conducting regular reliability checks.

Approach 3: assess the outputs of the rating process

A third validation approach focuses on assessing the outputs of the rating system: the scores and levels assigned to providers who undergo a rating, and the distributions of those scores within and across different types of providers. Studies conducted under this approach examine the degree to which the quality levels in the QRIS are meaningfully distinct from each other. The results of these studies may provide data that suggest that measures, cut scores, or rules for combining measures need to be changed in order to distinguish the rated quality levels effectively. Because these studies can result in proposals for significant changes to the standards for QRIS levels, it is helpful for these studies to occur prior to studies that examine associations between quality levels and children’s development.

Output studies may focus on individual indicator scores, such as how providers score on an environmental rating, as well as on the overall quality level that is the final output of the rating process. These studies may also utilize a measure of quality not included in the QRIS rating process to make an evaluation of concurrent validity, by examining whether assessments on both measures co-vary in predictable ways. The following section provides examples of the two states’ examinations of the distribution of quality ratings and rating-level advancement patterns for each program type enrolled in the state QRIS.

Examining initial QRIS rating distributions and cut points

While evaluators in Indiana and Maine did not conduct a detailed examination of the weighting or internal consistency of specific quality indicators, they did analyses to reveal the distribution of quality levels. After three years of system implementation, both Indiana and Maine QRIS child care providers were predominately rated at Level 1 or Level 2 (see Fig. 1). It is important to note that in Indiana, all providers enter the system at Level 1, and in Maine, providers can enter the system at any level based on their program rating, and then may advance at will from that level. A recent in-depth study of five state quality rating and improvement systems that were fully implemented found a similar pattern, with four of the five states reporting 40–76% of all programs enrolled in the lower tiers of the system (Mathematica Policy Research, 2011).

In Indiana, licensed child care centers were evenly distributed across the four QRIS levels approximately two years after the program inception. However licensed family child care homes were most frequently found at Level 1, with steeply declining numbers at the other three levels. This higher proportion of Indiana licensed centers rated at Level 3 or Level 4 may have been due to a greater historical emphasis in child care centers than in homes on regulation and attaining national accreditation, greater organizational capacity to complete the requirements of advancement in QRIS, or possibly that QRIS standards more closely reflect center quality than family child care home quality. Unlicensed registered child care ministries, a unique type of child care center in Indiana that is not licensed due to religious affiliation, participated at a much lower rate, and none had yet attained Level 4, reflecting significant challenges facing these unlicensed centers in meeting the Level 1 standards needed to enter the QRIS. These data patterns in Indiana...
supported the validity of the QRIS rating system in that they showed variation in quality ratings across participating providers, they reflected the increasing effort necessary to meet quality standards at higher levels, and they were interpretable within the state’s child care context.

Another gauge of overall quality rating system utility is the amount of program advancement to higher rated levels. It is reasonable to expect, if the QRIS is viable, that at least some providers will advance in quality level. In the Indiana evaluation, 19% of the licensed centers, 24% of the licensed homes, and 27% of the unlicensed centers advanced at least one QRIS quality level in a 6-month period between assessments, during which mentoring was provided by local training providers. This advancement pattern, if maintained over time, suggests that even though attaining the highest levels may be challenging, quality improvement is feasible.

For Maine, as Fig. 1 illustrates, center-based programs and family child care type programs are most frequently found at Step or Level One. A disproportionately small number of family child care programs have attained Step Four, the highest quality level, and a disproportionately large number of child care centers and Head Start programs are enrolled at Step Four. This pattern of fewer family child care homes enrolled at higher Step levels has existed throughout QRIS implementation in Maine. Maine family child care home providers argued that some of the program standards were “not a good fit,” despite designers’ beliefs that standards were well-matched to setting type. The large number of center-based and Head Start programs at the higher Step levels was expected, given that QRIS quality standards closely align with accreditation standards, and center-based programs are more likely to be nationally accredited than family child care homes.

An assumption of the designers of the QRIS in Maine was that programs engaged with QRIS will improve their tier levels consistently over time (Lahti et al., 2011). Approximately 80% of all programs (n = 1118) in the QRIS observed during the study period 2008 through 2011 did not experience a move up from one Step Level to the next. Results indicated that 95 of the 103 events or changes in Step Level from level one to two occurred during the first 23 months of enrollment. Moving from a Step One to Two, center-based care programs had a hazard probability of just .02 while family child care homes stayed virtually flat during this early period of enrollment in the QRIS. For movement from Step Two to Three, neither program type (p = 290) nor regional location (p = 195) appear to be significant in explaining Step level movement. For movement from Step Three to Four, the highest tiers in Maine’s QRIS, the analysis indicated that only type of program is a significant covariate explaining advancement. Family child care homes appeared to have a significantly lower probability of advancing a Step Level at this highest quality tier, compared with center-based and Head Start programs. These types of analyses of program movement in the system are relevant to the validation of a QRIS as they illustrate whether or not the way the system as designed is meeting its goals of supporting program advancement, leading to statewide improvement of program quality.

Studies may also be conducted to examine the degree to which given measures relate to other measures that purportedly assess the same concept. Here, strong correlation is desired, as they suggest that measures are measuring the concepts that they purport to measure in ways that are consistent with other measures of the same concepts.

**Indiana: assessing the output of the rating process**

The Indiana evaluation research included one validation test of state committee-generated quality standards, indicators, and levels by comparing the outputs of the QRIS rating system with independently gathered assessments of quality using validated quality measures, the environmental rating scales (ERS, Harms et al., 2005, 2006, 2007) and the Caregiver Interaction Scale (CIS; Arnett, 1989). The results, originally published by Elicker et al. (2011) and shown in Table 3, indicate that ERS scores co-varied as expected with QRIS rating levels, with a significant mean difference in global scores of 1.1 scale points between Level 1 and Level 4. Table 5 shows that caregiver interaction as observed using the CIS was less related to the rated QRIS quality levels. The overall correlation between the 4-level QRIS ratings and global ERS quality scores was moderate (r = .42, p < .01). The correlation between CIS adult–child positive interaction scores and QRIS level was more modest, but positive and significant (r = .24, p < .01).

Taken together, and looking across all types of providers, these results suggest that the QRIS ratings distinguish levels of quality in somewhat similar ways as two time-tested, validated measures of child care quality. However, mean quality levels at Level 4 were mostly found to be below the “good” rating threshold, suggesting the need to strengthen standards and/or rating procedures at the highest QRIS levels. In addition, finer analysis of the data suggested specific recommendations about quality standards and rating procedures that might be improved for each type of child care. Summaries of individual ERS item means for Level 3- and 4-rated providers led to the identification of a number of ERS items with scores below 4. Program planners are currently improving standards and QRIS rating procedures in light of these findings (Elicker et al., 2013).

In Indiana, patterns of association between QRIS ratings and ERS ratings were not the same for all types of child care. While the

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**Table 3**

Indiana QRIS: mean global quality ERS scores as a function of program type and rated quality level.

<table>
<thead>
<tr>
<th></th>
<th>Level one (n = 84)</th>
<th>Level two (n = 90)</th>
<th>Level three (n = 74)</th>
<th>Level four (n = 66)</th>
</tr>
</thead>
<tbody>
<tr>
<td>All providers (N = 314)</td>
<td>3.2 (.87)</td>
<td>3.7 (.76)</td>
<td>3.8 (.73)</td>
<td>4.3 (.80)</td>
</tr>
<tr>
<td>Family child care homes (n = 167)</td>
<td>2.9 (.64)</td>
<td>3.4 (.75)</td>
<td>3.6 (.67)</td>
<td>4.0 (.89)</td>
</tr>
<tr>
<td>Licensed child care centers (n = 133)</td>
<td>4.0 (.77)</td>
<td>4.0 (.68)</td>
<td>4.3 (.66)</td>
<td>4.5 (.67)</td>
</tr>
<tr>
<td>Unlicensed registered child care ministries (n = 14)</td>
<td>3.2 (.95)</td>
<td>4.1 (.45)</td>
<td>4.0 (.18)</td>
<td>NA</td>
</tr>
</tbody>
</table>

* Possible range = 1–7.

**Table 4**

Maine QRIS: mean global quality ERS scores as a function of program type and rated quality level.

<table>
<thead>
<tr>
<th></th>
<th>Step one (n = 82)</th>
<th>Step two (n = 99)</th>
<th>Step three (n = 79)</th>
<th>Step four (n = 82)</th>
</tr>
</thead>
<tbody>
<tr>
<td>All providers (N = 342)</td>
<td>3.7 (.77)</td>
<td>3.9 (.84)</td>
<td>4.0 (.80)</td>
<td>4.3 (.79)</td>
</tr>
<tr>
<td>Family child care homes (n = 129)</td>
<td>3.3 (.67)</td>
<td>3.5 (.80)</td>
<td>3.8 (.91)</td>
<td>4.2 (.83)</td>
</tr>
<tr>
<td>Licensed child care centers (n = 165)</td>
<td>3.9 (.72)</td>
<td>4.1 (.80)</td>
<td>4.2 (.68)</td>
<td>4.4 (.84)</td>
</tr>
<tr>
<td>Head start centers (n = 48)</td>
<td>NA</td>
<td>NA</td>
<td>4.1 (.75)</td>
<td>4.5 (.71)</td>
</tr>
</tbody>
</table>

* Possible range = 1–7.

Please cite this article in press as: Lahti, M., et al. Approaches to validating child care quality rating and improvement systems (QRIS): Results from two states with similar QRIS type designs. Early Childhood Research Quarterly (2014). http://dx.doi.org/10.1016/j.ecresq.2014.04.005
global ratings were significantly correlated in both licensed centers and licensed family child care homes, the strength of association was stronger for homes, meaning QRIS level ratings in homes more clearly distinguished levels of ERS-related quality, meaning at each QRIS-rated level, the ERS quality differences were generally greater than they were for centers. Second, the overall ERS quality levels for center-based preschool classrooms (using ECECRS-R; M = 4.6 at Level 4) were somewhat higher than for center-based infant classrooms (ITERS-R; M = 4.4 at Level 4) and family child care homes (FCCERS-R; M = 4.0 at Level 4). While the equivalence of quality scores across these three ERS scales is not supported by research evidence, the results taken together suggest the need to strengthen quality standards and assessment procedures for all types of care, so that child care providers at the highest rated levels are providing care that is at or above threshold levels recommended to impact children’s developmental outcomes (Zaslow, Martinez-Beck, Tout, & Halle, 2011).

**Maine: assessing the output of the rating process**

As in Indiana, differences in program quality were measured using Environmental Rating Scales (ERS) mean scores at the classroom level, and these scores were not part of the QRIS standards or ratings. The results presented here are from factorial ANOVAs to examine the effects of Step Level, ERS scale type and child care program type on the dependent variable ERS mean score. Table 4 provides the adjusted mean scores for all 307 classrooms and by each program type by Step Level. Table 4 is extracted from the full report on Maine’s QRIS (see Lahti et al., 2011).

The results show an overall significant difference between Step Level and ERS mean score at the classroom/setting level (F = 5.02; df = 3, 307; p = .002). Results of post hoc Bonferroni tests showed a significant difference between Step One and Step Four programs (p = .001) and between Step Two and Step Four programs (p = .001). The total variance of the mean ERS score explained by Step Level was only 5%, indicating weak relationships between the variables. Comparisons of the program type mean ERS quality scores indicated a difference only between the family child care homes and the center-based scores (p < .001). The family child care home mean scores were lower at each Step Level than the center-based setting scores with the exception of scores at Steps Three and Four. There did not appear to be any significant differences at Step Three or Four between the center-based and Head Start type settings (p = .97). The results provide some evidence for differences in rated quality, with higher ERS means for higher tier or step programs, most distinctly for family child care homes. Overall these mean scores suggest the need for considerable efforts at quality improvement, considering that the majority of settings are scoring below the “5” or “good” level on the ERS measures.

**Maine: parent level data on QRIS program quality**

In the Maine validation study, parents in programs selected for observation were asked to complete an anonymous survey that focused on services received by the parent and the parent’s perceptions of the quality of the program. The belief was that parents served by higher Step level programs should be receiving more supports and services and therefore may rate the program higher in level of quality. The response rate over the three-year study period was approximately 26% (N = 1478). These results are extracted from the full report on Maine’s QRIS (see Lahti et al., 2011).

Parental perception of program quality was measured by the 15-item Emlen scale, see Emlen, Koren, and Schulze (2000), and was found not to be correlated to Step Level rating (Pearson’s r = .01, p = .68). In terms of services parents should have received according to program standards, a majority of parents reported not receiving: information about other government services for their child; opportunities for parent engagement with the program; daily communication from the program about their child; and being provided an up to date written parent hand-book from their provider. There did not appear to be any difference in step level in terms of parents not consistently receiving these types of services as required by the program quality standards according to parent reports. The use of these data by QRIS administrators was primarily for monitoring purposes focused on services and or supports parents should have received based on requirements in the QRIS standards. While parents were asked about perceptions of program quality, due to a strong desire to reach out to parents as a key stakeholder in the QRIS, that information was not relied upon for program planning or program improvement.

**Approach 4: relate ratings to children’s development**

The fourth approach to validation focuses on children’s development. In many respects, this is the final step in validating a QRIS, and one that arguably should be delayed until the questions raised in the earlier approaches are addressed and changes made to the system as necessary. It may even be possible that new data will emerge that makes the costly and difficult effort involved in assessing child outcomes unnecessary. For example, if studies begin to show consistently that certain inputs, e.g., ratings-based coaching lead to substantial improvements in indicators such as instructional support, and if instructional support or other indicators is found to consistently promote improved child outcomes, it may be possible to argue that the inclusion of those inputs and measures of those outputs may suffice.

The logic models that underlie QRISs typically assert that higher quality care will be associated with improved child outcomes. Therefore, one important piece of validation evidence concerns whether children make greater developmental gains in programs with higher program-level QRIS ratings than in programs with lower ratings. While a definitive evaluation of QRIS impact on child outcomes would consist of an experimental study with random assignment of providers and children to QRIS levels, ethical and practical considerations often make experiments impractical, at least on a state-level scale. Instead, current studies evaluating QRIS validity in terms of child outcomes using this approach do not attempt to evaluate causal linkages. Instead, they examine whether the QRIS ratings and the quality components that comprise the ratings are associated in expected ways to measures of children’s development. Showing significant associations between QRIS-rated quality would be a first step, a necessary but not sufficient result to demonstrate causal inferences about how QRIS quality influences children’s outcomes.
To date, few QRIS validation studies have incorporated children’s outcomes. Maine did not include this approach to validation. As Elicker and Thornburg (2011) note, results from such studies are mixed, at least in part because of the challenges of conducting them. A primary challenge is the inability to control for all the factors that may confound the quality-outcome correlations for children whose families have selected programs in a non-random way. Additional challenges include the difficulty of recruiting of programs and children across all quality levels; lack of information about the amount of care children received in each setting (dosage); lack of appropriate outcome measures for children of diverse ages, abilities, cultures and linguistic backgrounds; and, lack of variation in the quality of participating QRIS programs. As noted above in the discussion of Approach 3, measurement error remains a problem.

Indiana: examination of ratings associated with children’s outcomes

To examine validity-related questions about children’s development in the context of the Indiana QRIS, the evaluators assessed the developmental status of 557 children (249 infants/toddlers; 308 preschoolers) who were in the care of QRIS providers. Two children per classroom or home were randomly selected in approximately equal numbers at all four QRIS levels. Data from parent interviews describing annual family income and parents’ education levels and participation in the CCDF voucher program were used as control covariates in the analyses. The basic validity question explored was: are children in higher-rated QRIS care functioning at higher levels, socially and cognitively, than children in lower rated care?

It is important to point out that this study of quality and child outcome associations was cross-sectional, with all data collected at one point in time. As mentioned earlier, exploring these correlational relationships does not substitute for longitudinal or experimental designs that can better evaluate the causal impact of the QRIS on child outcomes. However in the implementation phase of QRIS, it is useful to explore the developmental status of participating children, how they are distributed in the child care system, and whether associations between quality measures and measures of children’s functioning are occurring in the expected direction (Elicker & Thornburg, 2011).

Bivariate correlations and multiple regression models were used to explore the associations between children’s development and the three measures of child care quality: QRIS ratings (4 levels); ERS global quality scores; and a CIS composite rating of positive adult–child interactions. All regression models included parent education, household income, and type of child care. No significant correlations were found between the four-level QRIS quality ratings and either infant/toddler or preschooler developmental status. Some of the researcher-observed quality measures were mildly but significantly correlated with child development measures. For preschoolers, CIS positive interactions were correlated with social competence ($r = .17**$) and receptive language ability ($r = .34$, $p < .01$). For infants and toddlers, ERS global quality scores were associated with social competence ($r = .15$, $p < .01$), and total CIS positive interactions were associated with cognitive/language competence ($r = .17$, $p < .01**$). These significant correlations were entered as predictors in regressions of child outcomes on the quality variables, controlling for the family SES variables (parent education level and household income) that were also significantly correlated with the child outcome variables. As a result, for preschoolers, CIS positive adult–child interactions significantly predicted children’s receptive language ability, after controlling for family SES ($b = .12$, $p < .05$). For infants and toddlers, CIS positive adult–child interactions significantly predicted children’s cognitive/language competence, after controlling for family SES ($b = .14$, $p < .05$).

Family income was also a significant predictor, $b = .23$, $p = .009$.

Therefore while QRIS rated levels were not significantly associated with any child development measures for either infants/toddlers or for preschoolers, ERS and CIS quality measures were moderately associated with aspects of children’s development. Specifically, after controlling for family SES, it was the positive quality of interaction between adults and children that was associated with language and cognitive functioning, for both preschoolers and infants and toddlers.

Therefore it appeared that the specific aspects of child care quality assessed by the ERS and CIS measures are more likely to be associated with children’s development than are the composite of quality indicators represented by the 4-level QRIS ratings. This was true even though the QRIS ratings and the ERS and CIS were significantly correlated with each other. As a result, in Indiana, further refinement of QRIS standards and procedures is taking account of these findings, especially by identifying ways to strengthen QRIS standards and ratings to include the quality of adult–child interactions.

Discussion

Limitation to validation study designs

Both of these state studies provide results that describe linear associations among variables. The study designs are limited due to the fact that the investigators have no control over how the QRIS systems are implemented which affects enrollment and therefore sample sizes and selection of measurement strategies were also not in the sole control of the investigator. It will be interesting as additional studies are done and where non-linear associations are found to determine the impact this has on outcomes. These field studies were conducted with all the limitations associated with working in a developing system with multiple stakeholders. While the design presents a limitation in terms of arguing for causality and application of more sophisticated analytic approaches, it should be noted that the state agency program managers and other stakeholders in both states found the information generated from these studies of high value in terms of system planning, program improvements, and resource allocation. Depending upon context and resources, limitations to these two study designs can be remedied in future studies by such design choices as having programs that are on a waiting list be compared to programs already participating in their state’s QRIS.

Validation of QRIS is a process that needs attention over time, using more than one approach

The examples from Indiana and Maine illustrate how these validation approaches can work in practice, with tangible benefits for system improvement. These validation activities are specific to the design and implementation of each state QRIS. We believe it is important to stress to QRIS policy leaders that each of the four validation approaches needs to be used appropriately, considering the developmental stage of the QRIS and the unique features of the setting and QRIS. For example, states with QRIS in development can use the four approaches as a framework for planning how to validate their system. Developmentally then, an initial focus of QRIS design would be to validate the key concepts used in the QRIS design. The four approaches highlighted in this paper need to be considered as part of an ongoing process, not a one-time event. As states progress in their implementation of QRISS, more descriptive research is necessary to understand better how these validation approaches work in other settings, for example with point-based QRISS (rather than “building block” QRIS, like those in Indiana and Maine). Use of these approaches enables cross system comparisons,
Validation and early care and education system constraints

A QRIS is not merely a program-level quality-improvement intervention, it is a policy lever for strengthening a state’s overall early care and education system that reaches beyond child care (Schaack, Tarrant, Boller, & Tout, 2012). The two state validation efforts highlighted in this paper reflect the challenges and constraints common to other state experiences with validation activities (Lahti, Sabol, Starr, Langill, & Tout, 2013). On-site observations of global program quality and establishing and maintaining inter-rater reliability for QRIS raters is a time consuming and costly endeavor. Keen interest in school readiness may pressure program administrators to collect child outcome level data before a QRIS is well established. Current research on the measures that are in the widest use to predict child outcomes appear to do so consistently, especially for children at-risk, but with modest levels of association with program quality as measured by the ERS’s (for example, Burchinal et al., 2011). We recommend to policy makers to always take into account that any validation study is occurring within a dynamic system. System-level constraints such as varying resources available to programs, different type and design of programs, and challenges to measuring quality and reliably collecting information about program quality all influence the design and implementation of state-level QRIS validation studies.

Validation research is critical for performance measurement and improvement for a state QRIS

The 2012 Child Care Development Fund (CCDF) Plan preprint for fiscal years 2014–2015 includes a much larger focus on QRISs (U.S. Department of Health & Human Services, Administration for Children and Families, 2011). In this document, a QRIS is defined as “...systematic framework for evaluating, improving, and communicating the level of quality in early childhood programs.” States are expected to provide a self-assessment based on current program quality initiatives from a set of questions that are also organized according to a “QRIS framework.” Validation of program standards or assessment tools is mentioned specifically in relation to information states must provide about data and performance measures on program quality.

The information generated from QRIS validation activities can be used to inform efforts for continuous quality improvement. For example, both Indiana and Maine found that, for at least some types of providers, enrollment patterns in the QRIS, and lack of movement by programs once they are in the QRIS, is resulting in a large proportion of providers at the lower-rated quality levels of the quality tiers. System-level, quality-improvement responses to this information could be to re-assess the design of the system in terms of the ability of programs to meet standards at each tier, or to focus training/technical assistance on specific quality standards that are most challenging for providers to meet. At the same time, care should be taken to ensure that standards reflect current knowledge about the specific indicators and levels of quality most likely to produce the desired child outcomes. Findings from validation studies can be part of the information that state child care administrators use to assess the overall performance of the state early care and education system. The performance data could then be used by program administrators in making decisions about monitoring programs in a differential manner by visiting those programs more often who are having difficulty meeting QRIS standards (Fiene, 2013). We recommend that one focus of future research be learning more about whether and how information from the results of validation studies are used to improve system and program level performance in QRIS.

It will be interesting to determine as more validation studies are completed to analyze the differences between levels and how often lower quality is present in the top level which is the case with measuring compliance with licensing standards (Fiene & Nixon, 1985). Key areas to look at will be the movement of programs from one level to another, how long this takes, and are the increments equal or not in terms of quality improvement.

Another area to be explored which may have an impact on overall QRIS implementation are the fiscal constraints that many states are experiencing due to the recent recession and lower levels of federal funding. It would be interesting to note differences amongst states with large investments in quality improvement initiatives and those states with smaller investments.

It is important to remember that the QRIS is a policy lever and the validation of child care quality standards in a QRIS is a new phenomenon in early care and education policy-making. These four recommended approaches to QRIS validation, illustrated by validation research in these two states, even with their limitations, did provide policy makers and program administrators with information that guided efforts at system quality improvement. The use of these approaches in other studies will create a common nomenclature for better understanding threats to validity in a QRIS and ultimately increase our understanding of how best to design a QRIS that meets the needs of the parents, providers and children it serves.

References


Mastering course content and learner satisfaction in early childhood education: A comparison of regular classroom instruction with three variations of internet delivery

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Abstract

In the spring semester 2000, a Penn State course, ECE 479 (The Young Child's Play as Educative Process), was taught by the same instructor in four delivery formats. One group consisted of a regular classroom, held on campus. A second group, also on campus, was taught in a computer lab via the Internet; and there were opportunities for interaction with peers and the instructor. A third group took the course on the Internet as part of a local distance education group; hence, there were some limited opportunities for face-to-face interaction with peers and the instructor. The fourth group took the course on the Internet, as part of a statewide distance education group, where there were no opportunities for face-to-face interaction. Twenty students who enrolled in the course (5 per group) completed questionnaires and phone interviews. Information was gathered on professional backgrounds, computer experience, and initial level of content knowledge on the topic of the ECE Internet course. Sixteen students who completed the course were interviewed again to evaluate satisfaction with the course and to estimate learning outcomes. Across the four conditions general satisfaction was expressed with the content, activities, and course requirements and with the teacher. However, students in the three computer groups expressed dissatisfaction over technical problems (all four who did not complete the course came from these computer groups). Significant gains in content knowledge occurred for the classroom group, while the learning in the three Internet-based instruction groups did not show the same gains. Concern was expressed related to the lack of face-to-face interaction, making the learning environment less desirable. Although Internet technology provides a great deal of promise, these results suggest that improvements are needed to make this delivery modality more effective for in-service distance learning. © 2001 Elsevier Science Inc. All rights reserved.

1. Introduction

"I think the thing that I liked least and I know it's inherent in an Internet course is lack of human involvement. Lack of human contact. Not getting to talk with the instructor at all, face to face. That was very tough for me. The other thing was the lack of the immediate feedback. If you had a question you had to type it in and wait for the instructor to log on and read it and then get back to you."

\textsuperscript{*}This research was funded by Keystone University Research Corporation and the Penn State Consortium for Children, Youth, and Families. The authors gratefully acknowledge the role played by ECE doctoral students Hy-Jun Ahn and Jali Graboiski in helping develop the on-line course and World Campus specialist Cathy Holsing for her technical support and encouragement.

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“My frustration was that I don’t like to fall behind in anything. I felt like I was falling behind because I wasn’t able to access these readings, wasn’t able to do some of the things on the computer that I should have been able to do. I was just getting frustrated and feeling like this isn’t worth it for me. And that’s why I dropped the course.”

“The lack of being able to talk to anybody. The fact that you were doing all of this reading on your own. That was hard. I was used to sitting in classes and having someone lecture to me and then having students to interact with. It was difficult to get used to just reading it and absorbing it by yourself.”

“Just simple things like just being able to print the page on my screen out. I didn’t, I had no clue how to transfer stuff onto the hard drive and to be able to print something. I’m used to pressing the print button and stuff popping out. I didn’t know it was that much involved.”

The Internet is a new and ever expanding tool for learning (Benson & Meyers, 2000; Lan, 1999; Owston, 1998), including distance education (Williams, 1996). Whether or not the Internet can be an effective tool for training staff within the human services, particularly childcare staff, needs to be explored. Our project evaluated the effectiveness of the Internet training in terms of learning outcomes, its implementation (specifically, the technological aspects), and the student’s level of satisfaction with the course. The impetus for our project came from two sources.

First, Pennsylvania delivers childcare training to all licensed and registered childcare providers in the state and is interested in making this system more cost effective and efficient. Discussions related to utilization of the latest technologies, such as the Internet, are being considered. Secondly, a new initiative, CyberStart, will link all licensed childcare centers in Pennsylvania to the Internet. While this initiative is specifically designed to offer Internet access and educational programming for children, it will also make this technology available to childcare staff. Hence, there is a need to evaluate the feasibility and effectiveness of Internet-based distance education as it becomes more available to childcare centers.

2. Research design

A quasi-experimental design was employed, which consisted of four groups of five students who enrolled in the early childhood education (ECE) course ECE 479 The Young Child’s Play as Educative Process, which focused on play, communication, and curriculum. The first group experienced the traditional lecture/discussion course format. A second group took the course on the Internet, but within the context of a computer lab (located at Penn State York) where they had the opportunity to interact with their peers and the instructor. A third group took the course on the Internet as part of a local distance education (DE) group; this group also had some face-to-face interaction with their peers and knew the instructor. A fourth group took the course on the Internet, but as part of a statewide DE group. This group had no face-to-face interaction with their peers or the instructor.

This research design enabled us to examine the available technology to determine any hardware or software constraints, as well as the efficiency of the technological support services, by comparing groups that took the course via the Internet in different environmental circumstances (i.e., the on-campus computer lab vs. a home-computer set up). The research design also permitted us to evaluate the importance of the human element as a component of the effectiveness of this training modality since participants were in controlled settings with varying possibilities for face-to-face interaction.

Evaluating whether Internet training delivered to childcare staff is an effective training modality has special significance at this time given the paucity of empirical evidence to support or refute such claims. Research is needed to help the Pennsylvania Childcare and Early Childhood Development (PA CCE/ ECD) Training System, and comparable systems in other states, make more informed decisions about the use of Internet-based distance education for teachers of young children.

Given the exploratory nature of this study, a qualitative approach with a small sample was employed to generate data from questionnaires and interviews, as well as from course assignments completed by students. The questionnaire included items that tapped demographic characteristics (age, sex, and prior education), current position and experience within childcare, and experience with computers. Phone interviews, administered before and after the course, and lasting in duration from 30 to 45 min each, assessed students’ knowledge about play and perceptions about the course. In addition, select course assignments were independently graded to assess knowledge.

The course aimed to increase the students’ knowledge about play and its practical application. Two measures of the learning outcomes were used: (1) interview responses to questions about play given before and after the course and (2) grades on selected course assignments. The latter were independently evaluated by faculty other than the course instructor. Both measures were scored without knowledge of group membership.
From the phone interviews, students' answers to four questions about play were evaluated. The questions were: (1) What is play? (2) What is the value of play? (3) What is positive play? and (4) How can adults have a positive influence on play? Content analysis revealed that numerous ideas were elicited by these four questions both before and after the course. An empirically based coding system was developed and employed to score students' answers. Appendix A provides the categories and subcategories used in scoring.

3. Course development

The course *The Young Child's Play As Educative Process* (ECE 479), offered by the Department of Curriculum and Instruction in the College of Education at The Pennsylvania State University, was selected for this experimental study of Internet-based instruction. This particular course was chosen because it was viewed as well-developed and because it included both theoretical as well as practical content relating to ECE curriculum and instruction. Developing the course for Internet-based instruction required connecting with the Penn State World Campus (online learning). A contractual relationship was formed involving Keystone University Research Corporation (KURC), the contractor for the PA CC/ECD Training System, the College of Education, and the World Campus. Technicians from the World Campus, in collaboration with ECE faculty and doctoral students, worked to develop the course in time for offering it in the Spring of 2000.

3.1. Stage one – course structure

One of the first tasks was to establish the course syllabus, which included the course objectives and requirements, along with a schedule and sequence of learning activities. Objectives included acquiring a knowledge base of theory, research and practice concerning play and ECE, improving play observation and documentation skills, analyzing playthings for use in ECE settings, planning suitable indoor and outdoor environments for play, understanding and making sound judgments about the use of play facilitation strategies, and learning how and why to become an advocate for play in education. Requirements included an observation project, designing play environments, writing letters explaining play-based teaching to parents and to a 'blue ribbon committee' of educational professionals, as well as doing an implementation project and keeping a journal. *The Instructor's Manual to Accompany Johnson/Christie/Yavkey Play and Early Childhood Development, Second Edition* (Johnson, 1999) provided the guidelines for the overall course organization and sequencing, which followed the chapters of the text, with the content going from theory and research to policy and practice.

3.2. Stage two – course content

The course was organized into four modules with a number of online lessons or sessions in each module. There were a total of 26 sessions. Sessions were designed to last 50 min; students had a reading assignment for each session and a self-administered objective-item exam, which produced computer-generated feedback for self-evaluation. Also, open-ended discussion questions were assigned for chat room or bulletin board discussion. The objective items and the open-ended discussion questions came from the instructor's manual. Activities and problems were embedded in sessions and were sequenced and used in the same way across the four groups of students.

3.3. Stage three – course programming

The final formatting and programming of the course for Internet instruction occurred during the Fall of 1999. The course program included some special features to make the on-line learning experience more interesting. For example, an animated pop-in character (a cartoon owl) appeared on screen at various selected points throughout the sessions to ask questions as a real classmate might. The World Campus technical staff, with the assistance of the course instructor (third author), also prepared a home page for the course, which included the course schedule and contact information.

4. Participants

All 20 students were female, ranging in age from 23 to 60 with mean of 39 years. Sixteen students had a bachelor's degree and one a master's and two had a high school diploma or GED certificate. The most common college major was elementary education (*N* = 7). Only three students majored in ECE and had taken any previous courses on play. For the entire group, inservice training hours on this subject ranged from zero (*N* = 5) to 45 hours (*N* = 1), with a mean of 10.5 hours.

Fifteen students held the position of center director and three were assistant directors. One student had the title of childcare coordinator, and another was a personnel training coordinator and an assistant group supervisor. The length of time that the students worked at their current childcare center ranged from
a minimum of six months to a maximum of 23 years with the mean 9 years. The length of time that students had worked in the early childhood field ranged from 2 years to 25 years, with mean 11.9 years.

5. Findings and discussion

5.1. Prior computer experience

Students reported prior experience using personal computers ranged from no experience to 15 years. The mean value was 4.1 years. Seventeen students had a personal computer at home and were asked to indicate which specific activities they had used. Those uses included: word processing (15 responses); recreational software (12 responses); Internet (12 responses); and spreadsheets and/or databases (4 responses).

A questionnaire item asked who usually provided technical support for their home PC (e.g., installing new software or hardware, answering software questions, and fixing problems). No more than five students usually relied on themselves for technical support for their home PCs. Of the four students who chose “other,” three students usually relied on a friend, and one usually relied on another teacher in her childcare center.

5.2. Knowledge about play

For the following four play questions, each student’s answers given in the postcourse interview were compared with the precourse answers in order to evaluate whether there were response improvements, defined by an increase in positive responses and/or a decrease in negative responses (items 1 and 3), by an increase in the total number of distinct acceptable benefits of play given (item 2), or of distinct teacher’s roles (item 4) cited.

5.2.1. Question 1: what is the definition of play?

Responses were coded into the categories and subcategories and summed into two groups. Positive responses tallied the number of Attributes, Distinctions, and Realizations (A, D, R), while a second group of negative responses summed the total of overly-inclusive, mistakes, slogans, and vague replies (X, M, S, V). Other codes were considered “neutral” answers and were not used in this evaluation.

All classroom and computer lab students improved, as did the three statewide DE students who stayed in the course. Of the three remaining local DE group students, one failed to exhibit a positive response at both times of measurement; they gave five negative responses at precourse time of measurement and three negative responses at postcourse time of measurement.

Classroom students gave a total of 25 positive responses after the course compared to only 3 positive responses before the course. This averages five positive responses per student and exceeds the averages on this index for the other three groups (1.2, 1.6, and 2.3 for lab, local DE, and statewide DE, respectively). Classroom and lab students showed few negative responses before or after the course, while local DE students gave 8 negative responses and statewide DE students gave 13 negative responses before the course. However, in postcourse interviews the six DE students made only five negative replies.

5.2.2. Question 2: what are the benefits of play?

Total scores for number of distinct benefits were derived from the coding system employed in the study. All general and expressive answers given (G and E) were added with all functional answers to yield a total benefits (G&E + F) score. Benefits of play results are shown in Table 1.

As can be seen in Table 1, the classroom and lab students performed better than the local DE and statewide DE students on this item. They were able to identify significantly more functions of play, especially after the course was taken. Nine of ten students in the classroom/lab groups improved, but only 3 of 6 in the DE groups did. Note also slight decrease in scores by local DE group.

5.2.3. Question 3: what is good play?

Here positive responses were the number of Nominal and Process (N and P) ideas from each student, while a second group of negative responses summed the total of Failure (F) responses exhibited. Other codes were considered “neutral” and were not used here.

Only seven of 16 students improved. Evidently, the course did not impact very much how well students could answer this question. The best answer, the P answer, was given by only three students, all at postcourse time. Failure to distinguish good play from play (e.g., “all play is good”) happened six
times at pre-course time and eight times by the end of the course. Most students talked about types, functions and characteristics of play and failed to differentiate good play from play in an acceptable manner as determined by the coding and scoring system used in this study. This discouraging result may be because the scoring criteria were too harsh, or perhaps because interviewees did not understand the question. Also, it is possible that the course as taught, as well as the textbook as read, did not highlight the distinction well enough. In previous courses, this question has proven to be a "power question," distinguishing the "gold from the dross" in student performances.

5.2.4. Question 4: how can adults make child's play better?

Responses were analyzed with scores derived from the coding employed in the study. All general or attitudinal answers (G) per student were counted. Another group of answers covered the sum of all adult role responses (R). Total roles (G&R) were examined in the analysis. Table 2 shows mean scores across groups.

<table>
<thead>
<tr>
<th>Groups</th>
<th>Classroom</th>
<th>Computer lab</th>
<th>Local DE</th>
<th>Statewide DE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-course</td>
<td>3.8</td>
<td>2.4</td>
<td>4.0</td>
<td>3.6</td>
</tr>
<tr>
<td>Post-course</td>
<td>7.0</td>
<td>4.6</td>
<td>3.3</td>
<td>5.6</td>
</tr>
</tbody>
</table>

Table 2
Mean scores for total roles across groups before and after the course.

For assignments A and B the differences in scores for the four groups were statistically significant (Assignment A, F=5.574, p < .012 and Assignment B, F=4.628, p < .023). No significant differences were found for Assignment C. The computer lab group scored the lowest on assignments A and B while the other three groups of students all scored about the same. When all the assignments are totaled for an overall score, the traditional classroom performed significantly better than the other three groups (F=5.221, p < .015).

Students were also asked a series of questions about their expectations regarding the course, the benefits from taking the course, and their experiences in taking the course. The majority of the responses were very positive about the course in general, but the students who had taken the course via the Internet experienced a number of computer problems in either getting online or with the software. Everyone experienced problems and this delayed the start of the course for them for several weeks. There were problems with signing on, with the chat room, with passwords not being accepted, and so forth. However, once these problems were worked out, the course started and proceeded fairly well.

In sum, respondents revealed general satisfaction with the content of the course, the course activities, and course requirements. Moreover, there was a strong appreciation and high evaluation for the teacher. On the other hand, almost everyone (one or two exceptions) in the three computer groups expressed dismay over serious and continuing technical difficulties throughout the entire semester. However, even with a good course content, instructional design, teacher, and technical delivery, there were several people who clearly indicated reservations about Internet learning because it lacked face-to-face interaction. These people indicated that even if there were no technical difficulties, they would miss the human contact and would prefer courses or training taken in a classroom where there was greater opportunity for interpersonal interaction and contact.

Table 3
Scores on course assignments across four groups

<table>
<thead>
<tr>
<th>Groups</th>
<th>Assignment A</th>
<th>Assignment B</th>
<th>Assignment C</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Classroom</td>
<td>2.86</td>
<td>3.86</td>
<td>2.75</td>
<td>9.47</td>
</tr>
<tr>
<td>Lab</td>
<td>1.90</td>
<td>2.63</td>
<td>3.00</td>
<td>7.53</td>
</tr>
<tr>
<td>Local DE</td>
<td>2.69</td>
<td>3.37</td>
<td>2.50</td>
<td>8.56</td>
</tr>
<tr>
<td>Statewide DE</td>
<td>2.99</td>
<td>3.61</td>
<td>2.35</td>
<td>8.95</td>
</tr>
</tbody>
</table>
6. Conclusion

This evaluation provides insights into offering ECE courses over the Internet. Clearly, it seems that the success of this technology is dependent upon the persistence and knowledge of the student for learning to occur. Four students who did not complete the course were from the local (N = 2) and statewide (N = 2) Internet-based distance education groups; none were from the traditional classroom or computer lab settings. The students were administrators of childcare programs, fairly familiar with computers and knowledgeable of the course content. However, even with these pluses, the students still had considerable difficulty in accessing and doing the course online. Possibly the dropout rate would have been greater if the students were at a beginning stage of their career (Cohen, 2000; but see Schrum, 1992). Students in the traditional classroom and in the computer lab groups, where there was more face-to-face interaction, scored the best on the interview play evaluations. Evidently, these two training modalities were more effective than were the local and statewide distance education training modalities where there was little or no face-to-face contact with other students or with the instructor.

On the three course requirements, the classroom group scored the highest on assignments summed together (9.47); but the computer lab group scored the lowest on the assignments (7.53), with the two distance education groups in the middle. This is inconsistent with the results from the analyses of the interview responses to the four questions about play. Here both the classroom group and the computer lab group gained the most. Although it is perhaps encouraging to see that the students in the two distance education groups scored higher on the course assignments compared to the computer lab group, their results were still lower than the students’ scores from the traditional classroom group.

What have we learned from this study? For Internet instruction to be effective it seems that students must be technologically literate and knowledgeable about course content to some degree, and they must be persistent and highly motivated. Without these personal characteristics, the Internet course experience may not be a positive learning experience. The results of this study further suggest not utilizing Internet training across-the-board for childcare staff. It needs to be very targeted, beginning with directors of programs, who generally have the greatest experience and education and potential exposure to computer technology. More generic, across-the-board training for the beginning level practitioner does not make training sense at this point.

Internet technology provides a great deal of promise for reaching childcare staff with needed specialized in-service training in ECE. But first it is necessary that the technology gets the fine-tuning to ensure its effectiveness as a training modality for the majority of childcare providers. Also, what is best for on-line learning? Professional attention must be given to criteria for deciding the kinds of training content (e.g., learning facts like state regulations or understanding and applying concepts like play in ECE) in relation to its packaging (e.g., a full course like in this study, or modules, or single sessions analogous to workshops). Setting up realistic expectations for learners and designing the right means of instruction and assessment are both very important. Finally, we recommend that priority be given to designing orientation modules to prepare potential users for Internet-based distance education.

References


William, A. (1996, June). Integrating courses with the Internet: Preparing the teacher as well as the learner. Paper presented at the summer conference meetings of the Association of Small Computer Users in Education, North Myrtle Beach, SC.
Appendix Table 1

Question 1: What is play?
A1 Attribute of play given. For example, play is process-oriented, marked by positive affect, often non-literal, active, intrinsically motivated, etc.
A2 Tangential attribute of play given. For example, play is something adults like to see in children; child and adult do play of own free will, etc.
E Example of play is given. For instance, play is like playing with dolls or blocks.
F Function of play is noted as a way to define it. A way to learn things. A way to release feelings.
C Context of play is noted. Play can be solitary or done in a social group.
X Overly inclusive or general statement about play is made, such as “it is a creative process.”
D Distinction is made, contrasting play with other similar behaviors such as imitation or exploration.
R Realization is indicated, such as play is multidimensional, complex, or hard to define.
T1 Type of specific play is given, such as constructive or dramatic play.
T2 Type of general play is noted, such as educational play, dark play, and recreational play.
M Mistake is made, a falsehood is uttered.
S Slogan is cited; such as play is the child’s work.
V Vague pronouncement is made, unclear or hard to decipher.

Question 2: What is the value of play? What are its benefits?
General (educational) values include:
G1 Teaches skills and abilities or is a learning experience
G2 School preparation
G3 Allows for the practice of skills
G4 Generates further learning and development; allows children to go as far as they can with what they are learning
G5 Avenue for creativity
G6 Creates a well-rounded child
G7 Allows child to explore and discover on one’s own
G8 Allows child to experiment

Expressive values include:
E1 Enjoyment, fun, makes happy, love of life
E2 Relaxation, release energy, tension
E3 Vent frustration
E4 Be self
E5 Express self

Functional values include:
F1 Cognitive: abstract thinking * imagination * learning content * creativity * learn on own terms-relevancy, meaningfulness * problem-solving * meta-cognition * memory * social cognition, empathy, perspective-taking * theory of mind * sense of self * sense of others * assimilation, integration, application of learning
F2 Affective: motivating, feel good about self * self empowerment, sense of control * reduce anxiety, therapeutic, cathartic * self confidence, sense of self-assuredness
F3 Social: learn to resolve conflicts * cooperation * group cooperation, team member * leadership skills * learn to share * learn to take turns * learn to help
F4 Physical: gross motor * fine motor * learn to challenge self physically * self-help skills
F5 Attentional: concentration * attention regulation * persistence
F6 Assimilation
F7 Language: communication skills * literacy * become good story-teller * vocabulary
F8 Academic: reading and writing * shapes for math * science
F9 Life skills, careers

Question 3: What is good play? Positive play?
N Nominal answer is given, like educational play is good play.
P Process of play is said to be important, “perking along”, playing up to capacity.
C Characteristic of play in general is given without really answering the question.
T Type of play in general is given without really answering the question.
F1 Function of play in general is given without really answering the question.
F2 Failure to provide sensible reply, such as, “all play is positive.”

(continued on next page)
Appendix Table 1 (continued)

Question 4: How can adults make play better for children?

There are many roles to perform in the ECE profession with respect to children's play. Some are general or attitudinal such as:

G1 Value play, allow it to happen, be aware of your biases and those of others
G2 Realize when attitude change about play occurs in self or others
G3 Show an interest in play as a matter of public or educational policy
G4 Lobby and advocate on behalf of children's right to play as an integral part of childhood

Other roles in the ECE profession with respect to children's play pertain to classroom or home or child development center situations where young children learn and are cared for. These include:

R1 Stage manager, set up over-all positive and attractive environments, provide materials, playthings, space, toys, storage areas, time for play, literacy props, allow children choice of areas and activities, organize settings, rotate toys
R2 Be a careful and systematic observer, evaluate play, change own behavior as a result of observations, document play process and products
R3 Provide preparatory experience, bring in guest visitors, field trips
R4 Play facilitator, scaffold, support, challenge children at play, do not be overbearing, ask questions, offer comments, suggestions, ideas for play, teach play
R5 Co-player, be a play leader, model play behavior
R6 Supervise play, make sure play is safe, monitor activities, mediate conflicts, enforce rules, help children negotiate, guide and discipline, be a referee

Other roles inherent in the ECE profession connected with play have to do not with the children but with other adults. These include:

R7 Help adults be comfortable with play of children in educational settings, train teachers, educate staff about play in ECE
R8 Inform and involve parents in quality play with young children in formal and informal educational settings
Improving Child Care Quality Through an Infant Caregiver Mentoring Project

Richard Fiene
The Pennsylvania State University

ABSTRACT: An evaluation of a mentoring training program for infant caregivers is described. Fifty-two infant caregivers from 27 childcare center-based programs were involved in a four month long intervention in which they were paired with an experienced early childhood educator. The focus of the mentoring program was to improve the overall quality of the classroom environment, as well as making the caregivers more sensitive to the needs of the infants. The results clearly indicated that the mentoring program was very effective in improving the overall quality of the classroom, as well as making caregivers more sensitive to infants' needs.

KEY WORDS: infant caregivers; childcare; mentoring; training.

Introduction

This paper describes a child care mentoring project designed to improve the quality of infant and toddler child care programs in south central Pennsylvania. The goal of the mentoring project was to improve the quality of the child care environment and specifically the quality of caregiver-child interactions. As most caregivers in Pennsylvania only receive workshop training, the goal of this project was to compare the mentoring approach to the more typical workshop training. Mentoring is being explored because of its targeted intensive one-on-one nature in delivering training to caregivers based upon needs assessments. The project was conducted during the later half of 2000 and the beginning of 2001. The results presented in this paper are part of the pre- and post-test data collection phase (summer 2000 and winter 2000–2001) of this mentoring project. The actual mentoring intervention occurred from September through December 2000.

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Child & Youth Care Forum, 31(2), April 2002 © 2002 Human Sciences Press, Inc.
Mentoring in childcare has been documented in the literature for the past 10–15 years (Breunig & Bellm, 1996; Fenichel, 1992). It has been demonstrated to be an effective mode of training/technical assistance (Breunig & Bellm, 1996). However, in the majority of studies conducted there are few, if any, demonstrations that utilize a randomized trial design (Breunig & Bellm, 1996). Many studies track the progress of the intervention group, some studies have comparison groups, but few, if any, have employed a randomized design. This research paper will describe the pre- and post-test data collected as part of a study that has employed a randomized design.

The majority of research (Clarke-Stewart, 1987; Goelman & Pence, 1987; Howes, 1987; Phillips, 1987; Kontos & Fiene, 1987; Galinsky, Howes, Kontos, & Shinn, 1994; Scarr, Eisenberg, & Deater-Deckard, 1994; Iutcovich, Fiene, Johnson, Koppel, & Langan, 1997; Helburn, 1995; Fiene, 1995, 1996; Jorde-Bloom, 1988; Love, Schochet & Meckstroth, 1986) completed on early childhood quality has focused on preschool programs, with infant toddler programs rarely as the central focus of the research. The research completed in infant toddler programs has clearly documented the mediocre level of care provided to children in these programs (Iutcovich, Fiene, Johnson, Koppel, & Langan, 1997). In the present study, we focus on the first three years of life. All the centers and the classrooms reported upon in this study serve children from birth to less than three years of age.

This report is organized as follows: a methodology section briefly describes the sample selected with basic demographic information on directors, caregivers and the programs. This is followed by a results section that provides pre- and post-test average scores for each of the assessment tools utilized in this study to measure quality, caregiver behaviors, knowledge, and organizational climate of programs. This section is followed with a discussion section and implications regarding this mentoring project.

Methods

Study Design

This study involved 52 caregivers from 27 sites in south central Pennsylvania. All programs were child care centers licensed by the Department of Public Welfare. Seven of the sites were accredited by the National Association for the Education of Young Children.

This study employed a randomized design in which a self-selected group of programs and caregivers were randomly assigned to two groups, either the mentoring group or the comparison non-mentoring
comparison/control group. Intervention model mentoring group received intensive mentoring from a seasoned early childhood professional (minimum of 5–7 years of experience in the early childhood field as both a director and teacher) from September to December 2000. The mentoring model consisted of a problem solving approach in which the mentor spent a good deal of time observing in the beginning weeks in order to develop a trusting relationship with the protégé. Once both the mentor and protégé felt comfortable then suggestions could be entertained by the mentor.

The comparison group did not receive the mentoring intervention and only had the regular workshop type variety training available to them. However, the comparison group did receive mentoring during the Spring 2001 from March to June 2001. What is of interest in this study is to determine how much the two groups have improved from the pre-test data collection because they were essentially equivalent at that point on all measures.

Programs were recruited by the Capital Area Early Childhood Training Institute, a broad based community focused training institute. Program directors were invited to attend a meeting describing the mentoring project. Of those attending, 95% agreed to participate in the project. Fifty two caregivers started the project, 14 caregivers dropped out of the project between pre- and post-test. There was an equal drop out rate from both the mentoring and the control groups.

Data from the four quality measures used for all the programs are presented in Table 1. The four measures of quality were the Infant Toddler Environment Rating Scale (ITERS), the Arnett Caregiver Observation Scale, the Knowledge of Infant Development (KIDI), and the Bloom Scales of Organization Climate.

The program directors’ average age is 31 with a range from 24–53

<table>
<thead>
<tr>
<th>All Programs (n = 38)</th>
<th>Pre-Test</th>
<th>Post-Test</th>
<th>Change</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>ITERS</td>
<td>134</td>
<td>140</td>
<td>+6</td>
<td>ns</td>
</tr>
<tr>
<td>Arnett</td>
<td>30</td>
<td>40</td>
<td>+10</td>
<td>ns</td>
</tr>
<tr>
<td>KIDI</td>
<td>14</td>
<td>14</td>
<td>-0</td>
<td>ns</td>
</tr>
<tr>
<td>Bloom</td>
<td>78</td>
<td>79</td>
<td>+1</td>
<td>ns</td>
</tr>
</tbody>
</table>
years of age. They are predominantly Caucasian (81%). Eight percent have associate degrees, 78% have bachelor's degrees, and 14% have master's degrees. They had been employed as directors in their program for an average of 31 months with a range from 1 month to 120 months. Their average pay is between $20000–25000 per year. Sixty percent have health insurance and 45% have some form of dental or life insurance. Forty-five percent are in a retirement system.

The average age of caregivers in the programs was 36 with a range from 18–68. They are predominantly Caucasian (77%). Fifty-seven percent have high school diplomas, 16% have some college credits, 5% have CDA's, 16% have associate degrees, 5% have bachelor's degrees, and 2% have master's degrees. They have been employed as caregivers in their program for an average of 34 months with a range from 1 month to 153 months. They have worked in the early childhood field as caregivers for an average of 71 months with a range from 1 month to 312 months. Their average pay is between $10000–15000 per year. Fifty percent have health insurance and 33% have some form of dental or life insurance. Thirty-three percent are in a retirement system.

The average size of the centers is 98 children with 17 staff employed either full time or part time at the program. The average weekly fee for infant care is $137.00 per week and for toddler care is $124.00 per week. The majority of staff are employed at the centers for either less than 1 year or greater than 5 years.

Results

Both the mentoring and comparison groups were tested for equivalence at the beginning of the project in the pre-test data collection phase. There were no statistically significant differences on any of these measures at the pre-test. When the programs and caregivers were measured at the post-test, positive changes occurred although none were found to be statistically significant. In the aggregate, the programs that continued with the mentoring project showed improvements in the overall quality of care.

Tables 2 through 5 present the pre- and post-test data for the intervention and control groups.

These results indicate that the mentoring group showed increases on the program quality scales (ITERS and Arnett). This increase is especially noticeable on the ITERS. Further, there was a decrease in program quality with the control group, going from a score of 137 to 132. On the Arnett scale the mentoring group increased greater than the control group (11 point increase versus a 7 point increase).

Although the above results did not reach statistical significance,
### Table 2
**ITERS**

<table>
<thead>
<tr>
<th></th>
<th>Pre-Test</th>
<th>Post-Test</th>
<th>Change</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mentoring Group</td>
<td>134</td>
<td>141</td>
<td>+7</td>
<td>ns</td>
</tr>
<tr>
<td>Control Group</td>
<td>137</td>
<td>132</td>
<td>−5</td>
<td>ns</td>
</tr>
</tbody>
</table>

### Table 3
**Arnett**

<table>
<thead>
<tr>
<th></th>
<th>Pre-Test</th>
<th>Post-Test</th>
<th>Change</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mentoring Group</td>
<td>29</td>
<td>40</td>
<td>+11</td>
<td>ns</td>
</tr>
<tr>
<td>Control Group</td>
<td>33</td>
<td>40</td>
<td>+7</td>
<td>ns</td>
</tr>
</tbody>
</table>

### Table 4
**KIDI**

<table>
<thead>
<tr>
<th></th>
<th>Pre-Test</th>
<th>Post-Test</th>
<th>Change</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mentoring Group</td>
<td>14</td>
<td>14</td>
<td>-0</td>
<td>ns</td>
</tr>
<tr>
<td>Control Group</td>
<td>14</td>
<td>15</td>
<td>+1</td>
<td>ns</td>
</tr>
</tbody>
</table>
when specific subscales are analyzed several show significant differences (see tables 6 and 7). Several of the subscales on the ITERS and Arnett reached statistical significance with positive changes in routines (greeting/departing, meals/snacks, nap time, diapering/toileting, health/safety practice/policy) learning activities (eye-hand coordination, active physical play, blocks, pretend play, cultural awareness), sensitivity, and appropriate discipline for the mentoring group. The only statistically significant finding with the control group was in a negative change in interactions in which the scores decreased from pre-test to post-test. Paired t-tests were used in all of these analyses for Tables 6 and 7.

| Table 5  |
| Bloom |
| Pre-Test | Post-Test | Change | Significance |
|---------------------------------|
| Mentoring Group | 73 | 74 | +1 | ns |
| Control Group | 87 | 91 | +4 | ns |

| Table 6  |
| Mentoring Group |
| Pre-Test | Post-Test | Significance |
|---------------------------------|
| ITERS subscales | | |
| Routines | 36 | 41 | .005 |
| Listening activities | 8 | 9 | ns |
| Learning activities | 28 | 31 | .05 |
| Interactions | 13 | 13 | ns |
| Adult needs | 17 | 19 | ns |
| Arnett subscales | | |
| Sensitivity | 26 | 31 | .001 |
| Appropriate discipline | 7 | 9 | .05 |
Table 7
Control Group

<table>
<thead>
<tr>
<th></th>
<th>Pre-Test</th>
<th>Post-Test</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ITERS subscales</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Routines</td>
<td>41</td>
<td>42</td>
<td>ns</td>
</tr>
<tr>
<td>Listening activities</td>
<td>9</td>
<td>8</td>
<td>ns</td>
</tr>
<tr>
<td>Learning activities</td>
<td>29</td>
<td>31</td>
<td>ns</td>
</tr>
<tr>
<td>Interactions</td>
<td>15</td>
<td>13</td>
<td>.02</td>
</tr>
<tr>
<td>Adult needs</td>
<td>17</td>
<td>17</td>
<td>ns</td>
</tr>
<tr>
<td><strong>Arnett subscales</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sensitivity</td>
<td>28</td>
<td>31</td>
<td>ns</td>
</tr>
<tr>
<td>Appropriate discipline</td>
<td>6</td>
<td>7</td>
<td>ns</td>
</tr>
</tbody>
</table>

Discussion

These data demonstrate that the sites that were mentored improved on the ITERS and the Arnett. This is an encouraging result in that the intervention was only 4 months long. It is an important finding because the majority of mentoring projects in the past have utilized anecdotal evidence to demonstrate their effectiveness. Very few programs have conducted randomized trials of their interventions.

It is clear from the data that training/technical assistance interventions are needed in infant toddler programs because of the low scores on various program quality measures. It is also discouraging in that the control programs did not improve in which the ITERS went from 137 (pre-test) to 132 (post-test). This is a finding that will be monitored over time to see if this trend continues. Hopefully this was just an aberration in the data; however there does seem to be support when these data are compared to other studies (Iutcovich, Fiene, Johnson, Koppel, & Langan, 1997).

The public policy implications are that an intensive mentoring intervention of only four months can produce positive, although not statistically significant, changes in the overall quality of child care programs both globally and with caregiver interactions. Previous research (Johnson, 1994) has indicated that increasing the number of hours of training produces more developmentally appropriate behaviors in child care staff. Mentoring fits this model because it is an intensive one on one intervention in which the mentor and protégé are engaged in problem
solving activities to improve the overall quality of the interactions and environment of the child care program.

References


The Instrument Based Program Monitoring Information System and the Indicator Checklist for Child Care

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Office of Children Youth and Families  
Commonwealth of Pennsylvania

Mark Nixon  
Children's Services Monitoring Transfer Consortium, Washington, D.C.

ABSTRACT: The Instrument Based Program Monitoring Information System (IPM) and the Indicator Checklist (IC) are two tools for the state management of child day care services. A methodology for monitoring interviews and site visits to child day care programs is described. An integral feature of IPM is a system of assigning weights to the questions or items so that scores reflect the relative importance of state regulations. An Indicator Checklist is a questionnaire or checklist that contains selected, predictive items from a longer, comprehensive instrument that a state uses to monitor child day care providers' conformance to state day care regulations. An Indicator Checklist contains items that have been determined to be most effective in discriminating between providers that typically receive high overall scores on the comprehensive instrument and providers that typically receive low overall scores.

For nearly half a century, state governments have accepted responsibility for ensuring that those who care for children in their home and in day care centers meet minimum requirements for health and safety. During the past decade as the amount of state and federal funds for day care have grown, states have taken an active role in monitoring (1) the ways in which day care providers administer their programs, and (2) the quality of the services provided to children for whose care the state is paying.

Nationally, day care is big business. It is estimated that currently there are more than 118,000 licensed providers who serve an estimated 1.2 million children every day. The stakes in assuring that these children are well served are high, both in terms of public health and safety and from the viewpoint of enhancing the growth and development of America's most precious resource, its children. It is estimated that $6.3 billion dollars are spent annually on day care services.
However, in monitoring these services, states spend less than one percent of their day care funds each year to ensure that providers comply with regulations or meet quality guidelines.

This article describes an approach in monitoring child day care services called: Instrument Based Program Monitoring (IPM). An IPM differs substantially from the more common approach to monitoring: narrative site visit reports used by most states. The narrative report approach usually includes a site visit to each provider and the preparation of a summary of observations and interpretive and evaluative comments about the monitor's findings. These reports are time consuming to prepare, and often difficult to summarize succinctly for policy makers and administrators. This article describes an alternative to the narrative site report.

**Forces Changing the Regulatory Environment**

The job of state agencies in program monitoring is currently changing in response to powerful forces in American society, especially at the level of state government.

*First,* there is the continuing need to assure parents that their children will not be subjected to unsafe day care environments and that day care providers who receive state funds are meeting the terms of their contracts with the state by providing quality services. Quality services are defined as day care services that promote sound child development principles and do not only ensure that children are in healthy and safe child care environments. Public accountability requires that the state entertain a dual purpose, one is to monitor compliance with state regulations; but secondly and equally important, there is a strong need for the state to ensure that quality child development services are supported and provided.

Gwen Morgan's (1980) work is particularly helpful in providing direction regarding the relationship between licensing and funding criteria. A Model presented by Morgan (1980) clearly delineates a regulatory continuum where day care licensing is considered as the floor to quality with accreditation as the standard of quality for which model day care programs strive. Recent efforts by the National Association for the Education of Young Children (Center Accreditation Project (1983)) and the Children's Services Monitoring Consortium (Child Development Program Evaluation Scale (1984)) have helped to support this move towards accreditation and the measurement of quality in early childhood programs. These efforts take on additional meaning given the direction from the federal government to pass as much of the responsibility for monitoring early childhood programs to the states.
Second, the fiscal cutbacks that are now occurring in many states will almost certainly increase the pressure on state agencies to operate as efficiently as possible. Cutbacks in staff across agencies are likely, even as workloads increase. These factors will force states to streamline their regulatory enforcement and monitoring efforts in all areas, including day care and children's services. A promising approach attempted in some states is moving from a licensing to a registration system. In a registration system, the locus of control for the regulatory process is shifted from the state to the provider level—the provider is responsible for assuring that s/he meets all registration requirements.

Third, the role of the state in regulating private sector organizations is changing. There are now active pressures to reduce the general level of state regulation with a view toward encouraging private market forces in the production and allocation of goods and services. Further, there is a commitment in a growing number of states to reduce the extent of the Federal Government's involvement, including federal funding and accompanying regulatory requirements, in several areas, notably human services (The moratorium placed on the Federal Interagency Day Care Requirements is a specific example which was supported by a number of states).

Fourth, many states are actively seeking ways to reduce the burden on the private sector of the compliance monitoring activities that are performed by the state. For those regulations that continue in force, many states will be examining approaches that simplify monitoring procedures and make them less onerous for providers. This is particularly true for day care services, which are often provided by individuals or organizations that may have little experience coping with regulations.

**IPM as a Response to These Forces**

One approach that states have used to cope with these forces is the development of Instrument-Based Program Monitoring Systems—(IPMs).

As the name implies, an IPM system incorporates three distinguishing characteristics: First, it is instrument-based. The system uses checklists or questionnaires that contain highly specific questions. These questions usually correspond directly to the state's regulations or other requirements (e.g., fiscal requirements). Second, it supports program monitoring. In its broadest sense, program monitoring is the management process of conducting periodic reviews
or inspections to ensure that certain activities, such as the provision of day care service, meet acceptable criteria, and the process of effecting corrective action where required. Program monitoring may include one or some combination of:

1. Licensing reviews (Table 1 gives a listing of items taken from Pennsylvania's IPM at the licensing and minimal standards level);
2. Contract compliance reviews; and
3. Evaluations of program quality that go beyond minimum requirements to health and safety. A specific example that may be helpful is taken from the California Child Development Program Quality Review (1982) Instrument. What follows is a sampling of the Table of Contents:

   PROGRAM QUALITY SUB SCALE
   
   A. GOALS AND OBJECTIVES OF CHILD DEVELOPMENT PROGRAM ARE EVALUATED AT LEAST ANNUALLY BY THE STAFF AND PARENTS AND ARE MODIFIED AS NEEDED
   
   B. TEACHING STAFF HIGHLIGHTS EACH CHILD BY SHARING INDIVIDUAL ETHNIC AND CULTURAL BACKGROUNDS—EMPHASIS IS PLACED ON CARE-GIVER OBSERVATIONS.
   
   C. THE GOALS, OBJECTIVES, AND PROCEDURE FOR IDENTIFICATION OF CHILDREN'S NEEDS ARE EVALUATED AT LEAST ANNUALLY BY STAFF AND PARENTS (Fiene, 1984).

Third, IPM is a comprehensive system. It is part of a group of related steps such as on-site reviews, corrective action, follow-up reviews, and summarizing and reporting results that are used recurrently to accomplish the task of compliance monitoring. Program, fiscal, and statistical components can be linked quantitatively to constitute a comprehensive IPM system for day care. A new software decision support system (Watson, Fiene, & Woods, 1984) based on IPM is being developed for micro-computer technology and is being pilot tested in Michigan Department of Social Services, and Texas Department of Human Resources. When the IPM system is used in this linked fashion, it provides the basis for monitoring child day care Vendor & Voucher Delivery systems.

The advantages of an IPM system that are responsive to the changes mentioned earlier include: consistency, coverage of all regulatory areas, clear expectations simplified monitoring procedures,
TABLE 1
Pennsylvania Child Development Program Evaluation
Specific Items Within Identified General Areas

<table>
<thead>
<tr>
<th>General Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Relevant approvals</td>
</tr>
<tr>
<td>2. Insurance coverage</td>
</tr>
<tr>
<td>3. Parent participation</td>
</tr>
<tr>
<td>4. Child abuse reporting procedures</td>
</tr>
<tr>
<td>5. Provision for special services</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Staffing Standards</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Qualifications of staff</td>
</tr>
<tr>
<td>2. Responsibilities</td>
</tr>
<tr>
<td>3. Adult/child ratio and minimum</td>
</tr>
<tr>
<td>4. Staff health requirements</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Employee Records</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Evidence of qualifications and references for staff</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Building &amp; Site</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Appropriate indoor and outdoor materials</td>
</tr>
<tr>
<td>2. Characteristics of play areas</td>
</tr>
<tr>
<td>3. Sanitary facilities</td>
</tr>
<tr>
<td>4. Storage of medicine and equipment</td>
</tr>
<tr>
<td>5. Cleanliness</td>
</tr>
<tr>
<td>6. Screening of windows and doors</td>
</tr>
<tr>
<td>7. Heating apparatus</td>
</tr>
<tr>
<td>8. Educational materials available</td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>Equipment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Condition and placement of equipment</td>
</tr>
<tr>
<td>2. Swimming regulations</td>
</tr>
<tr>
<td>3. Napping rules</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Program for Children</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Evidence of written program plan</td>
</tr>
<tr>
<td>2. Discipline</td>
</tr>
<tr>
<td>3. Identification and referral of special needs children</td>
</tr>
<tr>
<td>4. Sanitary habits developed</td>
</tr>
<tr>
<td>5. Infant/toddler stimulation</td>
</tr>
<tr>
<td>6. School-age requirements</td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>Food &amp; Nutrition</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Menu requirements</td>
</tr>
<tr>
<td>2. Infant formula rules</td>
</tr>
<tr>
<td>3. Sanitary habits</td>
</tr>
<tr>
<td>4. Special diet considerations</td>
</tr>
<tr>
<td>5. Utensils</td>
</tr>
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<table>
<thead>
<tr>
<th>Transportation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Vehicles all licensed and inspected</td>
</tr>
<tr>
<td>2. Insurance coverage</td>
</tr>
<tr>
<td>3. Adult/child ratio</td>
</tr>
<tr>
<td>4. Restraint of children</td>
</tr>
<tr>
<td>5. First-aid kit materials</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Child Health</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Requirements of health records</td>
</tr>
<tr>
<td>2. Emergency contact information</td>
</tr>
<tr>
<td>3. Medical emergency procedures</td>
</tr>
<tr>
<td>4. Medications</td>
</tr>
<tr>
<td>5. Procedure for ill children</td>
</tr>
<tr>
<td>6. First-aid requirements</td>
</tr>
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<table>
<thead>
<tr>
<th>Staff Health</th>
</tr>
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<tbody>
<tr>
<td>1. Procedures for staff illness</td>
</tr>
<tr>
<td>2. Physical requirements for infant caregivers</td>
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<thead>
<tr>
<th>Procedures &amp; Applications</th>
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<tbody>
<tr>
<td>1. Pre-admission policy</td>
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<tr>
<td>2. Requirements for child's application</td>
</tr>
<tr>
<td>3. Requirements of day care agreement</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Child Records</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Frequency of updating records</td>
</tr>
<tr>
<td>2. Confidentiality</td>
</tr>
<tr>
<td>3. Information to be included in child's records</td>
</tr>
<tr>
<td>4. Parental rights to records</td>
</tr>
<tr>
<td>5. Procedure for release of information</td>
</tr>
<tr>
<td>6. Use of records after termination of service</td>
</tr>
</tbody>
</table>
and potential for cost efficiencies. With an IPM system, the same questionnaire or checklist is used with all providers, and there is less opportunity for individual bias in reporting results. Similarly, basing the questions or checklist items explicitly on the regulations or other requirements makes it possible to ensure that all areas are covered adequately. Having a clear set of questions that are known to both monitoring staff and providers reduces the possibility of misunderstandings and misinterpretations concerning the results of the review. Finally, standardized procedures for administering the questionnaire and processing the results can simplify the state's monitoring task and reduce the time, cost, and burden of monitoring both to the provider and to the state.

Four agencies (Pennsylvania’s Office of Children Youth and Families, West Virginia’s Office of Social Services, California’s Office of Child Development, and New York City’s Agency for Child Development) that are part of a consortium for improving the monitoring of children’s services (Children’s Services Monitoring Transfer Consortium) have experienced significant improvements in provider satisfaction with monitoring efforts and have, in some cases, achieved more efficient allocations of resources for day care and day monitoring. Pennsylvania has experienced substantial cost savings by linking the results of their IPM system to the state’s fiscal and statistical information systems (See Figure 1). The state was able to set a ceiling on

![Pennsylvania Model for Day Care Management-Information-Technical Assistance System](image)

**FIGURE 1**
day care funding that did not jeopardize program quality, and used the funds that were formerly given to high-cost providers to improve services of other providers on a targeted basis. The state saved approximately $5 million in day care funds while maintaining the quality of day care services, and it did so without major resistance from the provider groups. California has been able with its IPM system to begin automation of its licensing and program quality instruments and linking these data with unit cost and service information on providers. In the development of the program quality instruments, a representative sample of providers from across the state played a critical role in the development and implementation of California’s IPM system. These links are providing the basis for a child development, decision support system for the Office of Child Development in California.

**Indicator Checklist Improves IPM Systems**

Very recently, a number of states (Pennsylvania, West Virginia, Michigan, California, Texas, and New York) have begun experimenting with what has been called an “Indicator Checklist.” Simply defined, an indicator checklist is a questionnaire or checklist that contains selected items or indicators from a longer, comprehensive instrument that is used as part of an IPM system. The items on the checklist are those that have been determined to be most effective in discriminating between providers that typically receive high overall scores on the comprehensive instrument or provide a high level of quality care and providers that typically receive low overall scores or provide low level of care (Figure 2).

Because of their value in distinguishing between providers who are in compliance and those that are out of compliance, the items on the in-

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**The Indicator Checklist Approach**

![Diagram](image.png)

**FIGURE 2**
indicator checklist have been called "predictor" items. That is, they are a subset of items from the longer instrument that have a strong ability to "predict" the results that would have been obtained had the comprehensive instrument been administered to a given provider. In four of the states mentioned above, the average length of their respective Indicator Checklist's have been approximately 25 items. This compares with the average of approximately 200 items on their respective comprehensive instruments. The relationship between the scores obtained on the state's Indicator Checklists and their comprehensive instruments have been extremely high. When a Pearson's Product Correlation Coefficient was calculated on the Indicator Checklist and the comprehensive instrument for each state the correlation coefficients were always at a $r = +.80$ or higher (See Figure 2a for a graphic display of West Virginia's data).
Based on the results of Pennsylvania’s, West Virginia’s, California’s and New York City’s Indicator Checklists, certain common items were consistently showing up as predictor items that were separating those good providers from those problem providers. In other words, the following items were always in compliance for the good providers and were always out of compliance for the problem providers:

**LICENSING SUBSCALE**

A. **GROUP SIZE AND ADULT CHILD RATIOS:**
   - INFANTS: 1 STAFF TO 5 CHILDREN; 10 INFANTS IN A GROUP
   - TODDLERS: 1 STAFF TO 4 CHILDREN; 8 TODDLERS IN A GROUP
   - PRESCHOOLERS: 1 STAFF TO 10 CHILDREN; 20 PRESCHOOLERS IN A GROUP
   - SCHOOL AGE: 1 STAFF TO 15 CHILDREN; 30 SCHOOL AGE CHILDREN IN A GROUP

B. **SUFFICIENT SPACE—MINIMUM OF 40 SQ FT PER CHILD;**
C. **EQUIPMENT IS EASILY ACCESSIBLE TO CHILDREN;**
D. **ALL VEHICLES ARE EQUIPPED WITH AGE-APPROPRIATE SAFETY CARRIERS;**
E. **CLEANING MATERIALS ARE INACCESSIBLE TO CHILDREN;**
F. **EMERGENCY CONTACT INFORMATION IS AVAILABLE FOR ALL CHILDREN;**
G. **ALL STAFF HAVE HAD PERIODIC HEALTH APPRAISALS;**
H. **ACTIVITIES PROMOTE:**
   - DEVELOPMENT OF SKILLS
   - SELF-ESTEEM
   - POSITIVE SELF-IDENTITY
   - CHOICE OF ACTIVITIES.

(Fiene, 1984)

To most administrators and policymakers, the advantages of a shorter form will be readily apparent. The short form extends the general advantages of an IPM system in three key ways.

*First,* it substantially reduces the burden on providers, especially those providers that have a record of high compliance and are judged
suitable for use of the short form—it is proposed that these providers be visited once every three years using the comprehensive instrument. In the intervening years, the indicator checklist should be used.

Second, the indicator checklist approach can further reduce a state's cost of monitoring and permit the more efficient reallocation of staff resources to other activities. A cost effectiveness study conducted in West Virginia utilizing their indicator checklist resulted in a savings of 50% staff time in determining the level of compliance of providers (in dollars, this translated to $800 annually per visit saved (Peat, Marwick, & Mitchell 1983). With such a substantial savings in time, program monitors/evaluators could be freed to act more as consultants in providing technical assistance to providers.

Third, reviews of providers may be consolidated where appropriate. For example, state staff who perform fiscal/contract compliance audits of providers might be trained to administer the indicator checklist during their audit.

The total effect of maintaining a strong compliance monitoring capability that is less of a burden on providers and that achieves greater efficiency with lower cost is a higher quality monitoring system.

What is Needed to Develop an Indicator Checklist?

An indicator checklist is constructed as follows (See Figure 3):

1) Begin with an existing, comprehensive instrument that has a sufficiently large number of items so as to make greater efficiency desirable. The relative importance of each item as reflected in some kind of scoring or weighting system must have been established. Many criteria may be used for weighting the individual items. One criterion that is particularly useful for weighting purposes is the extent to which a particular item is related to health, safety, or developmental risks to children.

2) Your state should have used the comprehensive instrument long enough so that it is considered reliable for monitoring purposes; the instrument should have generated data that can be used to distinguish among providers in substantial compliance and weak or non-compliant providers.

3) With an existing, comprehensive instrument and some historical score information, it is possible to use a simple arithmetical formula (phi coefficient) to select those items from the long questionnaire that are most useful in distinguishing be-
tween good and inadequate programs. These distinguishing or "predictor" items form the basis of the indicator checklist (See Fiene & Nixon, 1983) for a detailed explanation of the formula for developing an indicator checklist).

4) The final step is to include on the short form particular questions or items from the comprehensive instrument that are of critical importance to the health and safety of children. Typically, these are items which, if violated, would be sufficient basis for denying or revoking a license for a day care program. Usually, such items are few in number. They are added to the short form with the predictor items to ensure that children will not be jeopardized by any statistical errors that might occur if only the "predictor" items were used.

From this description of the procedure for developing the shortened instrument, it is clear that the essential prerequisites for such a checklist are: 1. a long, comprehensive instrument in which state administrators have confidence; 2. items on the comprehensive instrument that are weighted to indicate their relative importance; 3. sufficient score data from use of the comprehensive instrument to differentiate among better and worse programs; and 4. state commitment to developing a short form instrument.

**Specific Concerns of Administrators and Policymakers**

It may be useful to address particular concerns of administrators and policymakers who may be interested in or even actively considering developing a shortened form of their state's monitoring or

**Constructing The Indicator Checklist**

![Constructing The Indicator Checklist Diagram](image)

**FIGURE 3**
licensing questionnaire or checklist. In particular, administrators will need to know: how their state can make use of an indicator checklist; whether indicator checklists have been tried by other states; how the quality of monitoring can be ensured; and whether there are potential drawbacks.

Can My State Make Use Of An Indicator Checklist?

Practically every state that presently has some form of questionnaire or checklist can potentially profit from using a shortened form of the instrument. Naturally, if your state's instrument is already sufficiently short, then little will be gained by being more selective about questions or items to include. Many states are confronted, however, with lengthy instruments that cover a wide range of requirement areas. These states are prime candidates for short-form instruments.

Similarly, perhaps obviously, if your state does not currently have an instrument-based system, then consideration of an indicator checklist/short form is premature.

In order to develop a successful indicator checklist, it is important that the items on your state's current instrument be clearly linked to:

1. Your state's requirements (regulations); and
2. The results or outcomes that are considered desireable with respect to the providers' performance in such areas as licensing, contract monitoring, and program quality.

Unless there is a clear correspondence between instrument items and requirements, there is a danger that the items selected for inclusion on the short form will be only loosely tied to regulations and may be perceived by providers as improper or illegal. Similarly, if there is only a weak link between items on your state's comprehensive instrument and the results that you expect from providers, then the ground for selecting particular items as good predictors will not be solid enough.

Have Indicator Checklists Been Tried By Other States?

The concept of an indicator checklist may be appealing, but administrators are usually hesitant to take risks that could jeopardize systems that have been developed through years of work. It is often satisfying to know that other states have already tested the concept in practice.

At present, the indicator checklist concept is still an innovation that holds great promise but has been fully implemented in only four
states; Pennsylvania, West Virginia, New York, and California have developed an indicator checklist/short form and are testing the concept. Because the initial analyses conducted by these states suggest that the short form can work, other states such as Michigan and Texas have declared their intention to develop a shortened instrument by using these states' experiences as a guide. Clearly though, the indicator checklist/short-form methodology is still in the experimental stage.

**How Can The Quality Of Monitoring Be Ensured?**

Top administrators may wonder whether the shortened instrument presented here will compromise the quality of their state's current monitoring effort. Our view is that the short form will enhance current monitoring efforts by increasing the efficient and effective utilization of monitoring staff. But there are precautions that states should take in developing and using indicator checklists.

The indicator checklist/short instrument should not be used as a substitute for the comprehensive instrument, but rather as its complement. If the short form is viewed as the monitoring instrument, then there may be a tendency over time for providers to meet only the requirements covered on the short form. This situation could, indeed, compromise the quality of monitoring.

On the contrary, we would anticipate that states might keep their comprehensive instruments as the definitive set of compliance expectations and administer them for the initial review (e.g., licensing review) of a provider, and could use the indicator checklist/short form as:

1. A screening device to determine whether, for a given provider, it is necessary to administer the longer version; and
2. An interim review instrument to be used as the principal tool for providers who have a good record of compliance.

For example, the comprehensive instrument might continue to be used for "problem" providers and on a periodic basis, say, every three years for good providers. Naturally, if the short form were used with a provider and problems were discovered, then the comprehensive instrument, or some portions of it, could be administered.

Over time, as conditions change, it will be necessary to update and revise both the comprehensive and short instrument. Using the comprehensive instrument at least periodically with all providers will provide a basis for modifying the short form to reflect changing compliance patterns.
We expect that both versions of the instrument would be used by state staff who are trained and competent to assess compliance. These staff would certainly not limit themselves to using the short form if they determined, on site, that conditions warranted using the comprehensive instrument. The purpose of the indicator checklist/short form is to increase the options available to the state for monitoring in a flexible and cost-effective manner, not to put unreasonable constraints or “blinders” on monitoring staff.

What Are The Potential Drawbacks?

As with all innovations, the introduction of an indicator checklist as the basis for routine monitoring in a state may create some problems. Because so few states have introduced indicator checklists on a widespread basis, it is difficult to identify all of the concerns that may arise in practice. However, a few potential problems can be anticipated. (See Table 2).

First, some states’ regulations require that all providers be reviewed every year in all regulatory areas. That is, the state insists that a comprehensive review, for example, using the comprehensive form of a state’s monitoring instrument, take place for each provider. If this is the situation in your state, then the use of a shortened instrument may depend on changing the current regulatory provisions concerning the frequency and scope of reviews. A strong basis for making such a change is the cost effectiveness of the indicator checklist/short form, that is, its potential for reducing monitoring costs substantially without reducing the quality of the monitoring effort.

<table>
<thead>
<tr>
<th>Potential Drawbacks</th>
<th>Possible Solutions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regulatory Requirement for Annual Comprehensive Review</td>
<td>Change Regulatory Requirements</td>
</tr>
<tr>
<td>Staff Resistance</td>
<td>Educate Staff</td>
</tr>
<tr>
<td>State’s Lack of Prerequisites</td>
<td>Seek Assistance in Obtaining Prerequisites</td>
</tr>
</tbody>
</table>

Second, the state’s staff who are responsible for monitoring may resist the introduction of the indicator checklist/short form. From their viewpoint, it may appear that the use of indicator checklists is a reduction in the importance of their professional roles and that the
state's cost savings may take the form of fewer jobs for day care monitors.

In our view, states may need to assure their staff that the indicator checklist/short form is not intended to reduce either the professional judgments involved or the scope of the monitoring function. As mentioned earlier, the comprehensive and short instruments must be used in a complementary way, not as substitutes, in order for the short form to have validity. If anything, the judgment of the monitors may be expanded as it becomes necessary to decide whether, in a particular case, the short instrument will be sufficient to measure compliance with state requirements, and/or program quality criteria. Monitors must be persuaded that the short form is an aid that is designed to reduce the monitors' workload for those providers with whom the short form is appropriate.

The reduction in workload may gradually change the relationship of monitors to providers from one of regulation to one of active support in improving the health and safety of the day care environment and encouraging child development. This change in the monitors' role could enable the state to make even better use of the current monitoring staff's knowledge and experience.

With respect to costs and staff reduction, there is little question that substantial decreases in workload could also result in reduced staffing levels. However, before considering cutbacks in staff, we would encourage states to consider reallocating staff time that is saved because of the short form to other monitoring activities such as technical assistance to providers involving program quality issues.

Third, a state may discover that it does not have the necessary prerequisites, described earlier, to develop and implement an indicator checklist. If your state lacks these prerequisites—in particular a comprehensive instrument, reports of scores, and a system of weighting items on the instrument—then it may be advantageous for you to examine other reports prepared by the Children's Services Monitoring Transfer Consortium that describe how these prerequisites can be met. You may be interested in obtaining the Consortium's series of Guide Books. The three volumes of this series describe in detail how to develop a comprehensive instrument from which an indicator checklist/short form can be derived.

Conclusion

The art of monitoring has evolved considerably in recent years as more highly trained staff have been given responsibility for monitoring, and as clearer procedures, such as instrument-based program monitoring, have been implemented. This evolution has con-
tributed positively to achieving the desirable outcomes of improved
day care for children for which the state has developed regulations. At
the same time, the evolution has, we hope, made it possible for
providers to operate more effectively with the minimum necessary
oversight by the state.

Instrument Based Program Monitoring Systems are now being
developed in other children's services such as MH/MR services. Pen-
sylvania has developed its child welfare information system based on
the instrument based program monitoring concept. This system meets
two needs for Pennsylvania: it tracks children through its foster care
system; and it complies with PL 96-272—the Adoption Assistance and
Foster Care Act—a federal law. West Virginia is attempting to use the
IPM methodology in monitoring its family day care home programs.

Also, a micro-computer, decision support system based on the In-
strument Based Program Monitoring and Indicator Checklist
methodology is being developed by the Children's Services Monitoring
Transfer Consortium (CSMTC). The CSMTC is a group of states
(Pennsylvania, West Virginia, California, New York, Michigan, and
Texas) who have been disseminating exemplary monitoring techniques
from state to state. Based on the combined efforts of these states, a
generic indicator checklist that measures compliance with state
regulations as well as program quality has been developed (Fiene,
1984). The CSMTC feels that this generic indicator checklist can be
used by states who have not developed an instrument to assess
providers, or as a model instrument to assist states in developing their
own instruments.

The real potential of monitoring in achieving social goals, (such as
protecting the health and safety of young children, ensuring quality
child development programs, and tying these to child development
outcomes), will be better realized through continuing research and
development of improved monitoring procedures. It is in this context
that the development of the indicator checklist represents a major ad-
vance in monitoring children's services.

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A Treatise on the Theory of Regulatory Compliance®

Richard Fiene

April 2019

Abstract
This treatise provides some insights into certain assumptions related to regulatory compliance and the implications for regulatory researchers and policymakers for the future development of rules/regulations (rules)(1). Once regulatory compliance decision making moves from requiring full compliance with all rules and moves to a substantial regulatory compliance decision making approach, the measurement and monitoring systems employed to assess programs/facilities (facilities)(2) change dramatically. This short treatise provides some thoughts related to these changes.

Keywords: Regulatory Compliance, Risk Assessment, Key Indicators, Licensing, Monitoring, Measurement.

1. Introduction
Regulatory compliance is a sub-discipline within regulatory science which focuses on measurement, monitoring systems, risk assessment, and decision making based upon regulatory compliance scoring. Regulatory compliance is dominated by nominal scale measurement, either a facility is in or out of compliance with specific rules. There is no middle ground with regulatory compliance as there is with more quality measurements which are generally measured on an ordinal scale; however, it has been brought to this author’s attention that some regulators do feel that certain regulations are not or should not be subject to nominal measurement. Another factor with regulatory compliance data is that it generally follows a very skewed frequency distribution which limits analyses to non-parametric statistics. Because of the skewed data distribution, dichotomization of data is warranted given the lack of variance in the regulatory compliance frequency distribution - the majority of facilities are either in full or substantial regulatory compliance.

An assumption within regulatory compliance is that full regulatory compliance, that is, 100% compliance with all rules, is the best (risk is minimized) possible scenario for the services being delivered and assessed. It was also assumed that all promulgated rules have an equal weight in their relative impact on the desired service delivery model although this thinking has been changing over time in how these rules are reviewed and complied with. This short treatise will provide the past 40 years of research delving into regulatory compliance measurement and will provide some guidance to regulatory researchers and policy-makers as they move forward with both research and policy development related to rules. The data from these research studies have led to a Theory of Regulatory Compliance which demonstrates that substantial regulatory compliance and not full regulatory compliance is a more effective and efficient public policy as it relates to monitoring and licensing decision making.

The results reported are drawn from the human services delivery systems in the United States and Canada, such as early care and education, as well as child and adult residential services. The results are from state and provincial level licensing systems involving over 10000’s of facilities serving over 100000’s of clients. All the data are part of an international regulatory compliance data base maintained at the Research Institute for Key Indicators and the Pennsylvania State University. Please see the following website for the data base (https://data.mendeley.com/datasets/kzk6xssx4d/1).

2. Methods
Alternate methodologies, logic models, and algorithms were developed directly from the Theory of Regulatory Compliance once it was determined that substantial regulatory compliance produced better results than full regulatory compliance. These methodologies created a differential monitoring or targeted monitoring approach based upon risk assessment which measures client morbidity and/or
mortality when individual rule non-compliance is assessed, and the determination of key statistical predictors for overall regulatory compliance(3).

Briefly these methodologies provide cost effective and efficient means for the ongoing monitoring of human service delivery systems by selecting and reviewing only those rules that either have a positive impact on clients, statistically predict overall regulatory compliance, or protect the health and safety of clients(4). Based upon regulatory compliance historical data, decisions could be made as to the frequency and depth of the reviews or inspections. Abbreviated reviews (inspections in which a subset of rules are measured), such as licensing key indicator rules or risk assessment rules, would only be done with those facilities with a history of high regulatory compliance. Those facilities with a history of high regulatory non-compliance would continue to receive full regulatory compliance reviews as they did in the past.

3. Results

Prior to 1979, it was always assumed that there was a linear relationship between regulatory compliance measures and program quality measures of human service facilities. In a study during that year which compared results from early care and education programs, in particular, child care centers, this assumption did hold up when one went from low regulatory compliance to substantial regulatory compliance. However, the results from substantial regulatory compliance to full (100%) regulatory compliance did not show the same linear relationship. Rather, it showed that those programs that were in substantial rather than full compliance were actually scoring higher on the program quality measures.

Since 1979, this result has been replicated in many other early care and education delivery systems both nationally in the United States (Head Start)(5) and in several states (Georgia, Indiana, Pennsylvania)(6). In all these studies, one finds a non-linear relationship between regulatory compliance and the overall quality of the facilities being assessed rather than a linear relationship.

4. Discussion

Based upon the results above, there are several assumptions within regulatory compliance that need to be reconsidered.

One, public policies that require full (100%) compliance with all rules may not be in the best interests of the clients being served nor is it an effective use of limited regulatory resources. Potentially, emphasis on substantial regulatory compliance may be a more effective and efficient public policy related to client outcomes when it comes to their health, safety and quality of life. Keep in mind that substantial compliance is still very high regulatory compliance (99-97% compliance with all rules) and produces positive client outcomes. As stated above, regulatory compliance data are extremely skewed data and are not normally distributed data. There is very little variance in the data and the majority of programs are in either full or substantial regulatory compliance.

Two, if a jurisdiction focuses on a substantial regulatory compliance public policy it opens up many system enhancements, such as differential or targeted monitoring, risk assessment analysis and statistical key indicator rules which have been demonstrated to be cost effective and efficient approaches to reviewing program performance. In a full regulatory compliance public policy focus, none of these system enhancements can be employed with the possible exception of the key indicator approach as delineated in number four below.

Three, if a jurisdiction takes the position that all rules are not equal then a risk assessment or weighting approach becomes an alternative approach based upon the assumption that certain rules place clients at greater risk of death, serious injury, or other types of actual harm.

Four, even if a jurisdiction does not have a licensing law which allows issuing licenses on the basis of substantial compliance there is the possibility key indicators could still be used for abbreviated reviews or inspections, if there is no prohibition in statute or regulation that expressly forbids the use of this approach, since key indicators statistically predict full regulatory compliance. In other words, all rules are statistically predicted to be in regulatory compliance based upon the results of the key indicators. So technically all rules have been reviewed albeit short of a full review or inspection.

Five, based upon previous research, utilizing a risk assessment approach along with a key indicator approach is the most cost effective and efficient differential monitoring system model. The reason is
that both predictive rules and those rules that place clients at greatest risk are always assessed when a site visit review or inspection is done. Many more jurisdictions use a risk assessment approach at this point, but there is a loss of predictive regulatory compliance by just using this approach.

Six, based upon previous regulatory compliance history, only those facilities in high regulatory compliance would be eligible for abbreviated key indicator and risk assessment reviews. Those facilities with a history of high regulatory non-compliance would continue to receive full regulatory compliance reviews. This gets at the essence of the differential monitoring approach which is cost neutral. Regulatory resources may then be reallocated from the abbreviated reviews to more in-depth full regulatory compliance reviews.

Seven, based upon the use of the key indicator and risk assessment methodologies within a differential monitoring approach, it is possible to identify over multiple jurisdictions if there are generic rules that meet the criteria of risk abatement and prediction. Such an application has occurred in the United States with the creation of early care and education standards entitled *Caring for Our Children Basics* published by the Administration for Children and Families, US Department of Health and Human Services (2015).

5. Conclusion

Regulatory compliance is relatively new in applying empirical evidence and basic scientific principles to its decision making. In the past, it had been dominated by case studies and long narrative reports which did not lend itself to quantitative analyses. There is a need to more clearly apply empirical evidence and the scientific method to rule development. Certain assumptions, such as full regulatory compliance as a sound public policy is lacking in empirical evidence. This treatise on a theory of regulatory compliance is provided for its heuristic value for both regulatory researchers and policymakers in rethinking some basic regulatory compliance assumptions.

It is not about more or less rules but finding the "right rules" that protect clients, predict overall regulatory compliance, and produce positive client outcomes.

6. Declaration of Conflicting Interest

The author declares no conflicts of interest.

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8. References

(1) I will use rules whenever I am referring to rules and/or regulations.

(2) I will use facilities whenever I am referring to programs and/or facilities.


(4) ibid.


(6) *State Key Indicators Reports*, Research Institute for Key Indicators, retrieved from http://RIKInstitute.com/riki reports.

THIS PRESENTATION CONTAINS ALL THE LATEST RESEARCH AND HISTORICAL RESEARCH RELATED TO ECPQIM AND DMLMA. IT PROVIDES THE HISTORICAL CONTEXT FROM ECPQIM1 THROUGH ECPQIM4. THERE ARE EXAMPLES PROVIDED THROUGHOUT THE SLIDES. ECPQI2M© HAS GONE THROUGH 4 MAJOR REVISIONS STARTING BACK IN THE LATE 1970’S TO EARLY 1980’S. THIS MOST RECENT GENERATION (4TH) PROVIDES THE MOST REFINED ALGORITHMS FOR BUILDING AN EFFECTIVE AND EFFICIENT PROGRAM MONITORING SYSTEM. ECPQI2M© IS A COMPREHENSIVE APPROACH TO PROGRAM MONITORING TAKING INTO ACCOUNT THE FOLLOWING SYSTEMS: LICENSING, QRIS, PROFESSIONAL DEVELOPMENT, ACCREDITATION, CHILD DEVELOPMENT OUTCOMES, PROGRAM QUALITY INITIATIVES, TECHNICAL ASSISTANCE/TRAINING, AND MENTORING.
This is the logo for the partnership between NARA and RIKI for the future development and implementation of differential monitoring, risk assessment, and key indicators for licensing and quality. This partnership was formed in August 2015 with an agreement between the two organizations.
### Contents

- Methods for Achieving Quality Child Care
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- DMLMA Expected Thresholds
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- Professional Development (PD) and Child Outcomes (CO)
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**TABLE OF CONTENTS** DELINEATING ALL ASPECTS OF DIFFERENTIAL MONITORING. THE THEORETICAL ASPECTS OF ECPQIM ARE GIVEN IN THE INITIAL SLIDES WITH THE DETAILS PROVIDED IN THE LATER SLIDES.
Methods for Achieving Quality Child Care by Gwen Morgan really depicts the key regulatory and non-regulatory methods for improving child care quality. I have used this conceptual framework in my design of the Early Childhood Program Quality Indicator Model (ECPQIM) over its four generational development starting back in 1985 with IPM/ICS and most recently with DMLMA (2012). The reader should pay particular attention to the new items added to the model since they add more structure and depth to it. Not all of these are even possible but should be given consideration based upon the resources in a particular state.
Quality care is achieved by both regulatory and non-regulatory approaches. However, licensing provides the threshold or floor of quality below which no program should be permitted to operate.
ADDITIONAL REGULATORY APPROACHES THAT HELP TO ENHANCE A QUALITY PROGRAM. ALL OF THE ABOVE SHOULD BE ENCOURAGED IN STATES. I WOULD ALSO ADD A MORE RECENT PROGRAM QUALITY INITIATIVE: EARLY LEARNING SYSTEMS (ELS) TO THE LIST UNDER “BEST PRACTICES”.
EXAMPLES OF NON REGULATORY APPROACHES. ALL THESE NON REGULATORY APPROACHES WILL HELP TO ENHANCE THE EFFECTS IN ESTABLISHING A HIGH QUALITY PROGRAM. THESE SHOULD BE COUPLED WITH THE REGULATORY APPROACHES OUTLINED IN EARLIER SLIDES.
Prior to the 1970’s most licensing reviews were done with long narratives explaining the results of monitoring reviews. By the early 1980’s Instrument Based Program Monitoring began to take root and a quantitative data driven approach was introduced. At the same time program quality tools, such as the Early Childhood Environmental Rating Scale (ECERS) and the Child Development Program Evaluation Scale (CDPES) were being introduced. TCO – Theory of Compliance Outcome/Regulatory Compliance was proposed which suggested a curvilinear relationship between PC and PQ or a plateau effect on PQ as PC went from substantial to full compliance with rules. This was a significant finding which really led to the development of the Key Indicator and Risk Assessment Methodologies. Without this relationship there probably would have been no need for either key indicators or risk assessment because full (100%) compliance would have been the goal of regulatory compliance. The question with this theory is does it apply to regulatory compliance in general where a curvilinear relationship would be observed with any sets of rules and regulations? This would have far reaching implications because the research literature appears to be geared to a linear relationship between compliance with rules and outcomes related to compliance with these same rules; or absolutely no relationship between rules and outcomes as the de-regulation advocates seem to suggest.
These data from the Head Start study (Fiene, 2013c – see the list of references at the end of these slides for the specific citation for the study) shows clearly the plateau effect with IS/CLASS and compliance with Head Start Performance Standards. The results of this study with the other two scales not showing this plateau effect demonstrates the strength of the HSPS when compared to Licensing Standards. This is an actual example of the previous slide’s relationship between a program compliance (PC) measure and a program quality (PQ) measure.
These data clearly demonstrate that by having higher standards (Pre-K (PK) programs)/(PQ) the plateau effect can be minimized or removed. This is a major revision to TCO. For 30 years the plateau effect has existed, this could be a way to change this effect. The next several slides are all taken from the same Fiene, 2013e study – see the references at the end of the slides for the specific citation to this study.
This graphic demonstrates the positive impact that higher standards can have on all programs impacted by high quality program such as Pre-K ($F = 4.464; p < .04$). Will the same thing happen with QRIS? Means = Pre-K (3.60); PS (3.26). $1 = $Pre-K; $0 =$no-Pre-K.
This slide shows the relationship between ECERS and Licensing Scores with the 100% Compliant programs scoring the highest on the ECERS. This scatterplot is what is expected in the relationship between program compliance and program quality scores. The correlation representing these data is -.60 which is significant at the .0001 level.
Please note the limited variation in the data, the restricted range and that the 100% licensing compliance programs are not scoring the highest on the ECERS. These are the major problems with licensing data over the past 30 years. The data indicate that the highest scoring programs on the ECERS are in substantial but not full compliance with the licensing rules. It was data sets like this that led me to propose TCO.
This slide shows how more evenly distributed the ECERS data base is in comparison to the licensing data. This is what is expected with an ECERS data set.
This slide clearly demonstrates the lower scores on the ECERS for child care/preschool programs (Georgia term for child care). There is not as much variation or dispersion in the data set as should be with an assessment tool that is generally normally distributed.
This slide clearly demonstrates the greater variance in the licensing data base with the Pre-K programs. Also note the large number fully compliant programs.
This slide shows how extremely skewed the licensing score data are with child care/preschool programs. Skewed data present many problems by introducing mediocre programs along side highly functioning programs when data are dichotomized. This is addressed more fully in later slides.
This slide dramatically shows the impact that higher standards as reflected in a Pre-K program can have on regular child care classrooms.
This graphic shows the impact that a high quality program such as Pre-K can have on all classrooms in a program. Not only do the Pre-K classrooms benefit but there is a spill over effect to those classrooms in the same building. The child care/preschool only (PS) child care programs had the lowest average scores on the ECERS.
This side by side graphic shows the impact of Pre-K classrooms on child care in general related to ECERS scores. CC w/Pre-K classrooms present in building = 3.60 on ECERS. CC w/o Pre-K classrooms present in building = 3.26 on ECERS. This is a statistically significant difference p < .04. Also note how the Pre-K impacts the kurtosis and skewness of the data.
Hopefully by using more normally distributed data from QRIS and PK systems which have higher standards than what is usual in licensing rules/regulations, we will be able to eliminate the plateau effect that has existed in the licensing research literature for over 30 years. This has been the goal of the ECPQIM model.
Based upon the results of the previous slides, an alternate regulatory paradigm was proposed which went counter to the prevailing regulatory paradigm at the time. The two paradigms had some very stark differences in how rules/regulations were viewed and reviewed. Hopefully over time with the impact of QRIS systems and their higher standards this will have a positive impact and the two paradigms differences will not be as stark. This is the ultimate goal of ECPQIM.
This graphic depicts the Differential Monitoring Model (Fiene, 2013/2014). This graphic was first introduced in the Office of Child Care National Center of Child Care Quality’s Licensing Brief on Monitoring Strategies: Differential Monitoring, Risk Assessment and Key Indicators (2015).
The DMLMA, the 4th generation of ECPQIM, unifies within a single program monitoring systems design the various key elements that impact on early care and education program quality. Generally this portion of the model is used with state agencies in describing how they can change their overall program monitoring system from an absolute, one size fits all to a relative/differential approach to monitoring. Risk assessment and key indicators are key elements of this model.
This is the full DMLMA model that includes professional development and child outcomes. Examples of all these key elements/components can be found in the upcoming slides.
The DMLMA, the 4th generation of ECPQIM, unifies within a single program monitoring systems design the various key elements that impact on early care and education program quality. Generally this portion of the model is used with state agencies in describing how they can change their overall program monitoring system from an absolute, one size fits all to a relative/differential approach to monitoring. Risk assessment and key indicators are key elements of this model. Recently DMLMA has been attempted with QRIS systems with limited results. In this version of the model, PD has been to the Program Quality Initiatives box rather than having it as a separate component.
This graphic updates the ECPQIM4©:DMLM© with additional information that has been gathered on the methodologies and the model in the past year or two. This graphic shows all the potential interactions. In actual state agency implementation the number of interactions will vary and not contain all those present in this graphic. See examples from Head Start, Georgia, Kansas, New York, and Illinois. See paper on the ECPQIM/DMLM examples.
This graphic provides a scoring protocol for the differential monitoring logic model on the previous slide. It is a means towards quantification which will lend itself to comparing the various approaches to differential monitoring. This could be a useful measure for future research in determining which differential monitoring approach works best. Is having all systems in place so much effective than only having KI or RA in place. Obviously having all systems in place will be much more costly than just having KI or RA in place.

<table>
<thead>
<tr>
<th>Score</th>
<th>Systems Present</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>No systems in place.</td>
</tr>
<tr>
<td>2</td>
<td>KI or RA in place and not linked.</td>
</tr>
<tr>
<td>4</td>
<td>(KI &amp; RA in place but not linked) or (PC + PQ are linked).</td>
</tr>
<tr>
<td>6</td>
<td>(KI &amp; RA in place) &amp; (KI + RA are linked).</td>
</tr>
<tr>
<td>8</td>
<td>(KI &amp; RA in place but not linked) &amp; ((PC + PQ) are linked).</td>
</tr>
<tr>
<td>10</td>
<td>All systems in place and linked.</td>
</tr>
</tbody>
</table>
This is a graphic display of the previous slide with national and state examples provided.
This table provides the point assignment algorithms for the systems that are present from the previous slide.

<table>
<thead>
<tr>
<th>Score</th>
<th>Systems Present and Point Assignment</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>No systems in place.</td>
</tr>
<tr>
<td>2</td>
<td>(KI (1)) &amp; (KI -&gt; DM (1)) or ((RA (1)) &amp; (RA -&gt; DM (1))</td>
</tr>
<tr>
<td>4</td>
<td>(PC + PQ (4)) or (KI (1) &amp; (KI -&gt; DM (1)) &amp; (RA (1) &amp; (RA -&gt; DM (1))</td>
</tr>
<tr>
<td>6</td>
<td>(KI + RA -&gt; DM (4)) &amp; (KI (1)) &amp; (RA (1))</td>
</tr>
<tr>
<td>8</td>
<td>(KI (2) &amp; RA (2)) &amp; (PC + PQ (4)).</td>
</tr>
<tr>
<td>10</td>
<td>(KI + RA -&gt; DM (4)) &amp; (KI (1)) &amp; (RA (1)) &amp; (PC + PQ (4))</td>
</tr>
</tbody>
</table>

KI (Key Indicators); RA (Risk Assessment); PC (Program Compliance/Licensing); PQ (Program Quality Initiatives); DM (Differential Monitoring).
This table shows actual data from a national organization (HS = Head Start) and several state agencies: Ga = Georgia; NY = New York; IL = Illinois; KS = Kansas; and CO = Colorado. KI = Key Indicators; RA = Risk Assessment; DM = Differential Monitoring; PC = Program Compliance/Licensing; PQ = Program Quality Initiatives.

<table>
<thead>
<tr>
<th>SYSTEMS (pts)</th>
<th>MODEL</th>
<th>GA</th>
<th>NY</th>
<th>HS</th>
<th>IL</th>
<th>KS</th>
<th>CO</th>
</tr>
</thead>
<tbody>
<tr>
<td>KI (1)</td>
<td>1</td>
<td>-</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>RA (1)</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>KI + RA -&gt; DM (4)</td>
<td>4</td>
<td>2</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>KI + RA (2)</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PC + PQ (4)</td>
<td>4</td>
<td>4</td>
<td>-</td>
<td>4</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>KI -&gt; DM (1)</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RA -&gt; DM (1)</td>
<td>-</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TOTAL (10)</td>
<td>10</td>
<td>8</td>
<td>6</td>
<td>10</td>
<td>6</td>
<td>2</td>
<td>2</td>
</tr>
</tbody>
</table>
The blue line represents effectiveness while the gold line represents efficiency. PC/CI and PQ are examples of systems that deal with effectiveness. They measure compliance with standards in general. KI, RA, DM are examples of systems that deal with efficiency. Monitoring in a shorter time, getting things done more quickly, in an abbreviated fashion. In any system you want the overall system to be effective. If there are sufficient or abundant resources then efficiency is not important. Efficiency becomes very important when resources become scarce.
A graphic depiction of the relationship amongst the Comprehensive Instrument (CI)(PC) as represented by Caring for Our Children (CFOC), Risk Assessment (RA) tool as represented by Stepping Stones, and Key Indicators (KI) as represented by the 13 Indicators of Quality Child Care. It depicts the movement from assessing all rules/regulations/standards to a fewer number having the greatest risk of morbidity/mortality for children to the fewest number of predictor rules.
This graphic shows when key indicators and risk assessments can be used based upon the licensing law in a specific state. Pay particular note to when risk assessment cannot be used, this is important to keep in mind.
This graphic demonstrates how *Caring for Our Children: Basics* fits into the pyramid presented two slides ago regarding comprehensive instruments, risk assessment, and key indicator tools. *Caring for Our Children: Basics* is a very important addition to how we address a national model for standards development.
This is a critical link in tying the DMLMA to Validation. Without validation one does not know if the system is behaving as it was originally intended. Validation gives us the ability to determine this by utilizing four approaches to validation as delineated by Zellman and Fiene in their 2012 OPRE Research Brief on the topic.
In order to validate the various key elements of the DMLMA model, there are expected correlational thresholds that should be attained when data are compared from the various data systems.
An alternate depiction of the DMLMA Expected Thresholds in a Correlational Matrix with all inter-correlations.

* This chart depicts the updated inter-correlations based upon the latest research analyzing the relationship between CI (PC), PQ and CO.

<table>
<thead>
<tr>
<th></th>
<th>PQ</th>
<th>RA</th>
<th>KI</th>
<th>DM</th>
<th>PD</th>
<th>CO</th>
</tr>
</thead>
<tbody>
<tr>
<td>CI</td>
<td>0.3</td>
<td>0.5</td>
<td>0.7</td>
<td>0.5</td>
<td>0.5</td>
<td>NS</td>
</tr>
<tr>
<td>PQ</td>
<td></td>
<td></td>
<td>0.3</td>
<td>0.3</td>
<td>NS</td>
<td></td>
</tr>
<tr>
<td>RA</td>
<td>0.5</td>
<td>0.5</td>
<td>0.5</td>
<td>0.3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>KI</td>
<td></td>
<td></td>
<td>0.5</td>
<td>0.5</td>
<td>0.3</td>
<td></td>
</tr>
<tr>
<td>DM</td>
<td></td>
<td></td>
<td></td>
<td>0.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PD</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.4</td>
<td></td>
</tr>
</tbody>
</table>
These are some considerations in interpreting the chart on the previous slide. To measure the overall impact of H&S and QRIS standards we may have been looking for the wrong outcome related to young children. Possibly we need to look at children’s health & safety outcomes rather than developmental outcomes.
These are the actual results from a state (Georgia) in which their Core Rules (CR) system of differential monitoring was validated.
This matrix provides the means for validating the Key Indicator System by comparing the key indicator scores with the comprehensive scores for each provider.

<table>
<thead>
<tr>
<th>Figure 1</th>
<th>Providers who fail the Key Indicator review</th>
<th>Providers who pass the Key Indicator review</th>
<th>Row Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Providers who fail the Comprehensive review</td>
<td>W</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Providers who pass the Comprehensive Review</td>
<td>Y</td>
<td>Z</td>
<td></td>
</tr>
<tr>
<td>Column Totals</td>
<td></td>
<td></td>
<td>Grand Total</td>
</tr>
</tbody>
</table>
Explanations of the cells from Figure 1.

- A couple of annotations regarding Figure 1.
- $W + Z =$ the number of agreements in which the provider passed the Key Indicator review and also passed the Comprehensive review.
- $X =$ the number of providers who passed the Key Indicator review but failed the Comprehensive review. This is something that should not happen, but there is always the possibility this could occur because the Key Indicator Methodology is based on statistical methods and probabilities. We will call these False Negatives (FN).
- $Y =$ the number of providers who failed the Key Indicator review but passed the Comprehensive review. Again, this can happen but is not as much of a concern as with “$X$”. We will call these False Positives (FP).
National sample validation data taken from the Head Start Key Indicator (HSKI-C) system.

<table>
<thead>
<tr>
<th></th>
<th>Providers who fail the Key Indicator review</th>
<th>Providers who pass the Key Indicator review</th>
<th>Row Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Providers who fail the Comprehensive review</td>
<td>25</td>
<td>1</td>
<td>26</td>
</tr>
<tr>
<td>Providers who pass the Comprehensive Review</td>
<td>7</td>
<td>17</td>
<td>24</td>
</tr>
<tr>
<td>Column Total</td>
<td>32</td>
<td>18</td>
<td>50</td>
</tr>
</tbody>
</table>
The calculations for the Agreement Ratio formula and the False Positives and False Negatives Ratios.
The ranges for making decisions on validation for the Agreement and False Negative Ratios.

<table>
<thead>
<tr>
<th>Agreement Ratio Range</th>
<th>False Negative Range</th>
<th>Decision</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1.00) – (.90)</td>
<td>.05+</td>
<td>Validated</td>
</tr>
<tr>
<td>(.89) – (.85)</td>
<td>.10 - .06</td>
<td>Borderline</td>
</tr>
<tr>
<td>(.84) – (.00)</td>
<td>.11 or more</td>
<td>Not Validated</td>
</tr>
</tbody>
</table>
This slide begins to list the key elements of the Differential Monitoring Model.

- **Key Elements**
  - **Program Compliance (PC)** generally represented by a state’s child care licensing health & safety system or at the national level by *Caring for Our Children*.
  - **Program Quality (PQ)** generally represented by a state’s QRIS, or at the national level by Accreditation (*NAEYC, NECPA*), *Head Start Performance Standards, Environmental Rating Scales, CLASS*, etc..
  - **Risk Assessment (RA)** generally represented by a state’s most critical rules in which children are at risk of mortality or morbidity, or at the national level by *Stepping Stones*. 
This slide continues the listing of key elements of the Differential Monitoring Model.

**Key elements (continued)**

- **Key Indicators (KI)** generally represented by a state’s abbreviated tool of statistically predictive rules or at the national level by *13 Indicators of Quality Child Care* and NACCRA’s *We CAN Do Better Reports*.

- **Professional Development (PD)** generally represented by a state’s technical assistance/training/professional development system for staff.

- **Child Outcomes (CO)** generally represented by a state’s *Early Learning Network Standards*. 
Differential Monitoring Benefits

- **Differential Monitoring (DM)** benefits to the state are the following:
  - Systematic way of tying distinct state systems together into a cost effective & efficient unified valid & reliable logic model and algorithm.
  - Empirical way of reallocating limited monitoring resources to those providers who need it most.
  - Data driven to determine how often to visit programs and what to review, in other words, should a comprehensive or abbreviated review be completed.

This slide presents the benefits of the Differential Monitoring Model.
Program Compliance/Licensing (CI)(PC)

- These are the comprehensive set of rules, regulations or standards for a specific service type.
- *Caring for Our Children (CFOC)* is an example.
- *Head Start Performance Standards* is an example.
- Program meets national child care benchmarks from NACCRA’s *We CAN Do Better Report*.
- No complaints registered with program.
- Substantial to full compliance with all rules.

The Program Compliance/Licensing (PC), Comprehensive Instrument (CI) key element of the DMLMA model. This is the essential foundation for any program quality system.
The advantages to moving from case notes to IPM:

- Cost Savings
- Improved Program Performance
- Improved Regulatory Climate
- Improved Information for Policy and Financial Decisions
- Quantitative Approach
- State Comparisons
State Example of Violation Data (Fiene, 2013d)

This example is taken from Kansas study. This is an example of the type of analyses a state can do with an Instrument based Program Monitoring system. This is a good example of data utilization in helping to inform public policy formulation.
### Head Start: Content Area Correlations (Fiene, 2013c)

<table>
<thead>
<tr>
<th></th>
<th>CHS</th>
<th>ERSEA</th>
<th>FCE</th>
<th>FIS</th>
<th>GOV</th>
<th>SYS</th>
</tr>
</thead>
<tbody>
<tr>
<td>CDE</td>
<td>.33**</td>
<td>.26**</td>
<td>.06ns</td>
<td>.14**</td>
<td>.13*</td>
<td>.33**</td>
</tr>
<tr>
<td>CHS</td>
<td></td>
<td>.29**</td>
<td>.18**</td>
<td>.09ns</td>
<td>.25**</td>
<td>.51**</td>
</tr>
<tr>
<td>ERSEA</td>
<td>.15**</td>
<td></td>
<td>.10*</td>
<td>.27**</td>
<td>.38**</td>
<td></td>
</tr>
<tr>
<td>FCE</td>
<td></td>
<td>.01ns</td>
<td></td>
<td>.17**</td>
<td>.23**</td>
<td></td>
</tr>
<tr>
<td>FIS</td>
<td></td>
<td></td>
<td></td>
<td>.13*</td>
<td>.23**</td>
<td></td>
</tr>
<tr>
<td>GOV</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.38**</td>
<td></td>
</tr>
</tbody>
</table>

CORRELATIONS AMONGST THE VARIOUS HEAD START PERFORMANCE STANDARDS MONITORING PROTOCOL CONTENT AREAS.
International study published in ICEP using the NACCRRRA protocol.
Additional details from that study – listing the specific benchmarks which is influenced by key indicator research.
The Program Quality (PQ) key element builds upon the PC key element adding specific process quality variables that may not be contained in the PC key element where there is more emphasis on the structural quality variables related to health and safety.
These analyses compare Keystone STARS QRIS to previous early childhood quality studies completed in Pennsylvania.
ECERS Score sheet. Please note the rating scale format (1-7 Likert scale) which is very different from licensing scoresheets where a compliance vs non-compliance scoring system is used.
Data from the ECPQ study showing the average quality scores as measured by the ERS’s for each of the setting types in homes and centers.

<table>
<thead>
<tr>
<th>Setting Type</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Head Start</td>
<td>4.9</td>
</tr>
<tr>
<td>Preschool</td>
<td>4.3</td>
</tr>
<tr>
<td>Child Care Centers</td>
<td>3.9</td>
</tr>
<tr>
<td>Group Child Care Homes</td>
<td>4.1</td>
</tr>
<tr>
<td>Family Child Care Homes</td>
<td>3.9</td>
</tr>
<tr>
<td>Relative/Neighbor Care</td>
<td>3.7</td>
</tr>
</tbody>
</table>
ECPQ 2002 Study looking at the percentage of programs in various forms of center based care and what level of quality the programs were performing at. Head Start was significantly higher than either child care centers or preschool programs.

<table>
<thead>
<tr>
<th></th>
<th>HS</th>
<th>CC</th>
<th>PS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Minimal</strong></td>
<td>8%</td>
<td>62%</td>
<td>35%</td>
</tr>
<tr>
<td>(3.99 or less)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Adequate</strong></td>
<td>46%</td>
<td>23%</td>
<td>44%</td>
</tr>
<tr>
<td>(4.00-4.99)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Good</strong></td>
<td>46%</td>
<td>15%</td>
<td>21%</td>
</tr>
<tr>
<td>(5.00 or higher)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
ECPQ study 2002 looking at the relationship between the education of the provider and the overall environmental quality of their respective classrooms as measured by the ERS’s.

<table>
<thead>
<tr>
<th>Education Level</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>High School Diploma (24%)</td>
<td>3.8</td>
</tr>
<tr>
<td>Some College (24%)</td>
<td>4.1</td>
</tr>
<tr>
<td>Associate’s Degree (17%)</td>
<td>4.2</td>
</tr>
<tr>
<td>Bachelor’s Degree (31%)</td>
<td>4.3</td>
</tr>
<tr>
<td>Master’s Degree (4%)</td>
<td>4.7</td>
</tr>
</tbody>
</table>
This study compared accreditation scores (NECPA) to program quality scores (ERS) to QRIS (Keystone STARS) scores.

<table>
<thead>
<tr>
<th></th>
<th>STAR 1</th>
<th></th>
<th>STAR 2</th>
<th></th>
<th>STAR 1 and 2 Combined</th>
<th></th>
<th>STAR 3</th>
<th></th>
<th>STAR 4</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>NECPA Score</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>n = 21</td>
<td>Mean: 647.04</td>
<td>Range: 408.99 to 887.54</td>
<td>s.d.: 163.79</td>
<td>n = 4</td>
<td>Mean: 648.1</td>
<td>Range: 365.84 to 881.93</td>
<td>s.d.: 220.87</td>
<td>n = 25</td>
<td>Mean: 647.21</td>
</tr>
<tr>
<td></td>
<td></td>
<td>n = 6</td>
<td>Mean: 83.50</td>
<td>Range: 59 to 138</td>
<td>s.d.: 30.81</td>
<td>n = 1</td>
<td>Mean: 79.0</td>
<td>Range: 59.0 to 138.0</td>
<td>s.d.: 28.17</td>
<td>n = 1</td>
</tr>
<tr>
<td><strong>ECERS-R Score</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>n = 20</td>
<td>Mean: 3.92</td>
<td>Range: 2.40 to 5.68</td>
<td>s.d.: .97</td>
<td>n = 4</td>
<td>Mean: 3.52</td>
<td>Range: 3.45 to 3.66</td>
<td>s.d.: .094</td>
<td>n = 24</td>
<td>Mean: 3.86</td>
</tr>
<tr>
<td><strong>NECPA Score</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Infant/Toddler Only)</td>
<td>n = 9</td>
<td>Mean: 3.72</td>
<td>Range: 2.81 to 5.22</td>
<td>s.d.: .706</td>
<td>n = 1</td>
<td>Mean: 5.01</td>
<td>Range: 3.85 to 5.22</td>
<td>s.d.: .781</td>
<td>n = 10</td>
<td>Mean: 4.29</td>
</tr>
</tbody>
</table>
There are certain conceptual similarities between licensing (PC)(CI) and program quality (PQ) in how overall decision making occurs with the specific rules or standards. Full (100%) compliance with child care health and safety rules is equivalent to a QRIS block system in which a provider must meet all standards for a particular star level. Substantial compliance (less than 100%) with child care health and safety rules is equivalent to a QRIS point system in which substantial but not full compliance with all the standards will attain a star level.
Determining Compliance

- Risk assessment
  - Identify requirements where violations pose a greater risk to children, e.g., serious or critical standards
  - Distinguish levels of regulatory compliance
  - Determine enforcement actions based on categories of violation
  - Stepping Stones to Caring for Our Children is an example of risk assessment (AAP/APHA/NRC, 2013)
- Key indicators
  - Identify a subset of regulations from an existing set of regulations that statistically predict compliance with the entire set of regulations
  - Based on work of Dr. Richard Fiene (2002) – 13 indicators of quality
  - “Predictor rules”

National Center on Child Care Quality Improvement, Office of Child Care

This slide is taken from an Office of Child Care’s National Center on Child Care Quality Improvement presentation at the NARA Licensing Seminar, October 2013.
Risk Assessment (RA) key element helps us to focus on those most important rules/regulations/standards that place children at most risk for mortality or morbidity.

- Risk Assessment (RA) are those rules which place children at greatest risk of mortality or morbidity.
- *Stepping Stones* is example of Risk Assessment Tool and Approach.
- When Risk Assessment (RA) and Key Indicators (KI) described in next slide are used together, most cost effective and efficient approach to program monitoring.
- 100% compliance with RA rules.

Risk Assessment (RA) key element helps us to focus on those most important rules/regulations/standards that place children at most risk for mortality or morbidity.
Georgia’s example of RA with their core rules.
RA Example = Stepping Stones

Best example of a RA at the national level.
This is a template that can be used by states to crosswalk their ECE Rules to the **13 key indicators of quality and Stepping Stones** to determine where potential gaps and risk factors exist within their rules.
Key Indicators (KI) (Fiene & Nixon, 1985)

- Key Indicators are predictor rules that statistically predict overall compliance with all rules.
- *13 Indicators of Quality Child Care* is an example of this approach.
- Most effective if KI are used with the Risk Assessment (RA) approach described on the previous slide.
- Must be 100% compliance with key indicator rules.

Key Indicators (KI) key element are those key rules/regulations/standards that focus a licensing inspection or monitoring visit in order to save time because you are reviewing such a small number of rules/regulations/standards.
Advantages of Key Indicators

- Quality of Licensing is maintained.
- Balance between program compliance and quality.
- Cost savings.
- Predictor rules can be tied to child outcomes.

Pluses for using a KI approach.
Pre-Requisites for Key Indicators

- Licensing rules must be well written, comprehensive, and measurable.
- There must be a measurement tool in place to standardize the application and interpretation of the rules.
- At least one year’s data should be collected.
Outline for developing KI. These steps should be followed as closely as possible. We have found that state agencies have not followed the methodology as tightly as possible and sometimes have referred to key indicators when in reality they had developed a risk assessment tool.

How to Develop Key Indicators

- Collect data from 100-200 providers that represent the overall delivery system in the state.
- Collect violation data from this sample and sort into high (top 25%) and low (bottom 25%) compliant groups.
- Statistical predictor rules based upon individual compliance.
- Add additional rules.
- Add random rules.
Some of the criteria that can be considered for using Key Indicators.

- The facility had:
  - A regular license for the previous two years
  - The same director for the last 18 months
  - No verified complaints within the past 12 months
  - The operator has corrected all regulatory violations cited within 12 months prior to inspection
  - A full inspection must be conducted at least every third year
  - Not had a capacity increase of more than 10 percent since last full inspection
  - A profile that does not reveal a pattern of repeated or cyclical violations
  - No negative sanction issued within the past 3 years
Short historical perspective on Key Indicators.
This graphic shows the relationship amongst comprehensive reviews, key indicators, and risk assessment rules. Only key indicator rules predict non-compliance while risk assessment rules are based upon relative risk a child is placed in because of non-compliance.
The blue line is the number of key indicators that are included in the abbreviated tool. As the number of indicators increase the chances of non-compliance decrease more the system becomes less efficient. With fewer indicators, there is an increase in possible non-compliance although the specific indicators are better predictors. The gold line is the non-compliance with all the rules/regulations and is most effective when the greater number of key indicators are used. Decreasing the number of key indicators by having very stringent phi coefficients/p-values increases the chances of finding additional non-compliance because less significant indicators are not included in the abbreviated tool. A more general way of thinking about this is when Effectiveness > Efficiency and when Efficiency > Effectiveness the regulatory compliance system is out of balance. What a state agency wants is when Effectiveness = Efficiency or as close as possible because than the regulatory compliance system is in balance.
This is the data collection and organization phase for generating the key indicators.

![Key Indicator Formula Matrix](image)

<table>
<thead>
<tr>
<th></th>
<th>Providers In Compliance with specific standard</th>
<th>Programs Out Of Compliance with specific standard</th>
<th>Row Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>High Group = top 25%</td>
<td>A</td>
<td>B</td>
<td>Y</td>
</tr>
<tr>
<td>Low Group = bottom 25%</td>
<td>C</td>
<td>D</td>
<td>Z</td>
</tr>
<tr>
<td>Column Total</td>
<td>W</td>
<td>X</td>
<td>Grand Total</td>
</tr>
</tbody>
</table>
Key Indicator Matrix Expectations

- $A + D > B + C$
- $A + D = 100\%$ is the best expectation possible.
- If $C$ has a large percentage of hits, it increases the chances of other areas of non-compliance (False positives).
- If $B$ has a large percentage of hits, the predictive validity drops off considerably (False negatives).

This slide provides further explanation to the 2 x 2 matrix on the previous slide regarding expectations related to data distributions. These can become major concerns for state administrators as they consider using a key indicator approach.
Formula used to generate the Key Indicators.

\[ \phi = (A)(D) - (B)(C) \div \sqrt{(W)(X)(Y)(Z)} \]

- **A** = High Group + Programs in Compliance on Specific Compliance Measure.
- **B** = High Group + Programs out of Compliance on Specific Compliance Measure.
- **C** = Low Group + Programs in Compliance on Specific Compliance Measure.
- **D** = Low Group + Programs out of Compliance on Specific Compliance Measure.

- **W** = Total Number of Programs in Compliance on Specific Compliance Measure.
- **X** = Total Number of Programs out of Compliance on Specific Compliance Measure.
- **Y** = Total Number of Programs in High Group.
- **Z** = Total Number of Programs in Low Group.
This is the decision making chart for what gets included as Key Indicators in both Licensing and Program Quality QRIS systems.

<table>
<thead>
<tr>
<th>KI Coefficient Range</th>
<th>Characteristic of Indicator</th>
<th>Decision</th>
</tr>
</thead>
<tbody>
<tr>
<td>(+1.00) – (+.26)</td>
<td>Good Predictor - Licensing</td>
<td>Include</td>
</tr>
<tr>
<td>(+1.00) – (+.76)</td>
<td>Good Predictor – QRIS</td>
<td>Include</td>
</tr>
<tr>
<td>(+.25) – (-.25)</td>
<td>Unpredictable - Licensing</td>
<td>Do not Include</td>
</tr>
<tr>
<td>(+.75) – (-.25)</td>
<td>Unpredictable - QRIS</td>
<td>Do not Include</td>
</tr>
<tr>
<td>(-.26) – (-1.00)</td>
<td>Terrible Predictor</td>
<td>Do not Include</td>
</tr>
</tbody>
</table>
These are examples of key indicator applications but not only with health & safety licensing in various states and the 13 Key Indicators of quality child care, but also from the office of head start, accreditation, ERS, CIS, potential development in QRIS and other human services, such as child and adult residential.
These are examples taken from several data bases of Key Indicators generated at the state and national levels. What is still remarkable to me is the consistency over the years in which the key indicators have not changed much from the original list published back in 1985 in the Child Care Quarterly article.
CFOC:B (Caring for Our Children: Basics) is potentially the contents of the monitoring tool that the OCC will be using to monitor compliance with CCDBG/CCDF starting in 2015. This would fit into the ECPQIM4/DMLMA graphic as presented earlier and provides a tool for the implementation science side of the equation as it relates to the public policy/translational research intersection. CFOC:B is as significant a document as Developmentally Appropriate Practices when it was published by NAEYC back in the 1970’s. CFOC:B is the logical conclusion of ECPQIM when key indicators and risk assessment methodologies are combined together at the national level.
Legend:
NRC = National Resource Center for Health and Safety in Child Care
AAP = American Academy of Pediatrics
APHA = American Public Health Association
OHS = Office of Head Start
ACF = Administration for Children and Families
OCC = Office of Child Care
ASPE = Assistant Secretary’s Office for Planning and Evaluation
13I = Thirteen Indicators of Quality Child Care (2002), ASPE
HSKI-C = Head Start Key Indicators (2013)
Stepping Stones = Stepping Stones to Caring for Our Children (2013), NRC, AAP, APHA
* Other tools, standards and legislation comprise CFOCB (2015); this graphic only shows the relationship between CFOCB and Key Indicators and Risk Assessment Tools
This is the front page of the Child Care Development Block Grant Re-Authorization bill. A major change in how child care program quality and monitoring would be addressed.
These are the key indicators for a QRIS – Colorado QualiStar, first time done. All the key indicators are taken from the Family partnerships standards. Study and analysis done in 2014.

<table>
<thead>
<tr>
<th>QRIS Key Indicators – CO. QualiStar</th>
</tr>
</thead>
<tbody>
<tr>
<td>- The program provides opportunities for staff and families to get to know one another.</td>
</tr>
<tr>
<td>- Families receive information on their child’s progress on a regular basis, using a formal mechanism such as a report or parent conference.</td>
</tr>
<tr>
<td>- Families are included in planning and decision making for the program.</td>
</tr>
</tbody>
</table>
### The Key Indicators from Stepping Stones (3rd Edition)

- 1.1.1.2 - Ratios for Large Family Child Care Homes and Centers
- 1.3.1.1 - General Qualifications of Directors
- 1.3.2.2 - Qualifications of Lead Teachers and Teachers
- 1.4.3.1 - First Aid and CPR Training for Staff
- 1.4.5.2 - Child Abuse and Neglect Education
- 2.2.0.1 - Methods of Supervision of Children
- 3.2.1.4 - Diaper Changing Procedure
- 3.2.2.2 - Handwashing Procedure
- 3.4.3.1 - Emergency Procedures
- 3.4.4.1 - Recognizing and Reporting Suspected Child Abuse, Neglect, and Exploitation
- 3.6.3.1 - Medication Administration
- 5.2.7.6 - Storage and Disposal of Infectious and Toxic Wastes
- 6.2.3.1 - Prohibited Surfaces for Placing Climbing Equipment
- 7.2.0.2 - Unimmunized Children
- 9.2.4.5 - Emergency and Evacuation Drills/Exercises Policy

Key Indicators for Stepping Stones 3rd Edition. The Fiene 13 indicators updated for the latest version of Stepping Stones.
An outline of how the HSKI – Head Start Key Indicators was developed.

- Interest in streamlining the monitoring protocol – Tri-Annual Reviews.
- Selected a representative sample from the overall Head Start data base.
- The Head Start monitoring system is an excellent candidate for developing key indicators and differential monitoring system:
  - Highly developed data system to track provider compliance history.
  - Well written, comprehensive standards.
  - Monitoring Protocols in place for collecting data.
  - Risk assessment system in use.
  - Program quality (CLASS) data collected.
- Example of a national system using key indicators.
- Head Start has all the key elements present from the Differential Monitoring Model as presented earlier.
THESE ARE THE STATISTICALLY GENERATED HEAD START KEY INDICATORS FROM A 2012-13 STUDY.

<table>
<thead>
<tr>
<th>CM</th>
<th>Phi</th>
<th>ES</th>
<th>CO</th>
<th>IS</th>
<th>Total Violations</th>
</tr>
</thead>
<tbody>
<tr>
<td>CDP4.1</td>
<td>.28***</td>
<td>.10*</td>
<td>ns</td>
<td>ns</td>
<td>.30***</td>
</tr>
<tr>
<td>CHS1.1</td>
<td>.39***</td>
<td>.15**</td>
<td>.16**</td>
<td>ns</td>
<td>.39***</td>
</tr>
<tr>
<td>CHS1.2</td>
<td>.33***</td>
<td>.18**</td>
<td>.15**</td>
<td>.10*</td>
<td>.36***</td>
</tr>
<tr>
<td>CHS2.1</td>
<td>.49***</td>
<td>.18**</td>
<td>.15**</td>
<td>ns</td>
<td>.54***</td>
</tr>
<tr>
<td>CHS3.10</td>
<td>.39***</td>
<td>.11*</td>
<td>.11*</td>
<td>ns</td>
<td>.24***</td>
</tr>
<tr>
<td>PRG2.1</td>
<td>.31***</td>
<td>.11*</td>
<td>ns</td>
<td>ns</td>
<td>.46***</td>
</tr>
<tr>
<td>SYS2.1</td>
<td>.47***</td>
<td>.15**</td>
<td>.16**</td>
<td>.14**</td>
<td>.55***</td>
</tr>
<tr>
<td>SYS3.4</td>
<td>.58***</td>
<td>.13*</td>
<td>.10*</td>
<td>ns</td>
<td>.36***</td>
</tr>
</tbody>
</table>

* p < .05  
** p < .01  
*** p < .001
## Head Start Key Indicators Sample Content

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>References</th>
</tr>
</thead>
<tbody>
<tr>
<td>HSKI.1</td>
<td>The program engages parents in obtaining from a health care professional a determination of whether each child is up to date on a schedule of primary and preventive health care (including dental) and assist parents in bringing their children up to date when necessary and keeping their children up to date as required.</td>
<td>1304.20(a)(1)(A), 1304.20(a)(1)(B), 1304.20(a)(1)(C)</td>
</tr>
<tr>
<td>HSKI.2</td>
<td>The program ensures that each child with a known, observable, or suspected health, oral health, or developmental problem receives follow-up and further testing, examination, and treatment from a licensed or certified health care professional.</td>
<td>1304.20(a)(2)(A), 1304.20(a)(2)(B), 1304.20(a)(2)(C)</td>
</tr>
<tr>
<td>HSKI.3</td>
<td>The program, in collaboration with each child’s parent, performs or obtains the required linguistically and age-appropriate screenings to identify concerns regarding children within 45 calendar days of entry into the program, obtains guidance on how to use the screening results, and uses multiple sources of information to make appropriate referrals.</td>
<td>1304.20(a)(2)(D), 1304.20(a)(2)(E), 1304.20(a)(2)(F)</td>
</tr>
<tr>
<td>HSKI.10</td>
<td>Maintenance, repair, safety of facility and equipment</td>
<td>1304.25(a)(1)</td>
</tr>
<tr>
<td>PO2.1</td>
<td>Members of the governing body and the Policy Council receive appropriate training and technical assistance to ensure that members understand information they receive and can provide effective oversight of, make appropriate decisions for, and participate in programs of the Head Start agency.</td>
<td>642(b)(3)</td>
</tr>
<tr>
<td>STSKI.1</td>
<td>The program established and regularly implements a process of ongoing monitoring of its operations and services, including delegate agencies, in order to ensure compliance with Federal regulations, adherence to its own program procedures, and program-related goals developed through its Self-Assessment process.</td>
<td>1304.47(a)(2), 644Ag(3)</td>
</tr>
<tr>
<td>STSKI.4</td>
<td>Prior to employing an individual, the program obtains Federal, State, or Tribal criminal record checks covering all jurisdictions where the program provides Head Start services to children, families, staff, or Tribal criminal record checks as required by the law of the jurisdiction. The program provides Head Start services, Criminal record checks as otherwise required by Federal law.</td>
<td>644Ag(1)(A), 644Ag(1)(B), 644Ag(1)(C)</td>
</tr>
</tbody>
</table>
The HSKI-C is Head Start’s new program monitoring approach in their Aligned/Differential Monitoring System. This is really a major game changer because Head Start is a very large national program impacting 100,000’s of children and their families.
There are certain conceptual similarities between licensing (PC)(CI) and program quality (PQ) in how overall decision making occurs with the specific rules or standards. Full (100%) compliance with child care health and safety rules is equivalent to a QRIS block system in which a provider must meet all standards for a particular star level. Substantial compliance (less than 100%) with child care health and safety rules is equivalent to a QRIS point system in which substantial but not full compliance with all the standards will attain a star level.
These are specific key indicators generated from CIS, FDCRS, and ECERS. For the first time, the ECERS Item 16 had a perfect phi = 1.00 taken within two separate samples with Pennsylvania data (ECPQ1, 2002; ECPQ2, 2006).
This is an actual example taken from the ECERS in which key indicators were developed. With Item 16 the phi coefficient was a perfect +1.00 which is unusual to ever obtain. This occurred in two separate studies, in 2002 and 2006. When normally distributed data are used as is the case with ERS's, it is more likely to obtain much higher phi coefficients because of the dichotomization and sorting of data.
This is a box plot of ECERS Item 16 which clearly depicts why this item is such a good key indicator being able to predict high compliance (5+) when a program is in compliance (5+) with this item. The phi coefficient is +1.00. Item v16a (0 = 3 or less; 1 = 5+).
This is a box plot of ECERS item 39 which has a phi that is non-significant and you can see why with the overlap between when a program is in compliance (5+) with Item 39 and when it is out of compliance (3 or less). This item does not predict very well when it comes to distinguishing between high compliance (5+) and low compliance (3 or less) because several programs that were out of compliance (3 or less) on this item fell within the range of the high group (5+). Item e39a (0 = 3 or less; 1 = 5+)
The data distributions for normally and skewed data sets. PQ data such as ERS are more normally distributed while licensing data are more skewed. This is a very important distinction because skewed data provides more challenges both statistically and from a policy stand point. These challenges will be explained in the subsequent slides.
ECERS data show a more normally distributed curve than what one finds with licensing data.
State’s Family CC Home Licensing

A state’s family child care home licensing data which depicts the classic skewness of data always present in licensing data in general.
This graphic shows how even HSPS – Head Start Performance Standards compliance data are skewed in a similar fashion as state licensing data.
The graph depicts the potential data distributions found in ERS, QRIS, and Licensing scoring systems. The data distribution that is preferred is the normally distributed ERS data example. Both the QRIS and licensing data distributions lend themselves to dichotomization of the data.
This slide begins to address the many shortcomings of licensing data because of its skewness. This is a major concern because by introducing mediocre programs into the high group, it will create both false positive and negatives in the decision making process. A solution to this problem is to increase the level of the standards (have higher standards) which will help to normalize the data distribution and act as a better discriminator of the best programs. This has naturally occurred in ECE with the introduction of Pre-K and QRIS systems at the state level. Will we need to see over time if this normalization of the data distribution continues to occur.
Differential Monitoring Options

- Reward good compliance:
  - Abbreviated inspection – if no serious violations, for a period of time
  - Fewer full compliance reviews if compliance record is strong
- Response to non-compliance:
  - Additional monitoring visits
  - Technical assistance

- The number of core rule categories cited and the assigned risk level determines the annual compliance level. (Georgia)

- Determine how often particular rules are included in inspections. Rules that pose the most risk of harm to children if violated are reviewed during all inspections. (Virginia)

National Center on Child Care Quality Improvement, Office of Child Care
These are the Provider Outcomes (PO) that help to determine how to deploy Differential Monitoring (DM). Differential monitoring in the use of abbreviated assessments is only intended to be used with programs that have had a history of sustained excellence.

<table>
<thead>
<tr>
<th>Provider Outcomes to Determine Differential Monitoring (DM)</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Fully licensed – substantial/full compliance.</td>
</tr>
<tr>
<td>- Potentially accredited (NAEYC/NECPA).</td>
</tr>
<tr>
<td>- Highest star rating.</td>
</tr>
<tr>
<td>- Cost effective and efficient delivery system.</td>
</tr>
<tr>
<td>- Little turnover of staff and director.</td>
</tr>
<tr>
<td>- Fully enrolled.</td>
</tr>
<tr>
<td>- Fund surplus.</td>
</tr>
<tr>
<td>- The above results determine the number of times to visit &amp; what to review and resources allocated.</td>
</tr>
</tbody>
</table>

These are the Provider Outcomes (PO) that help to determine how to deploy Differential Monitoring (DM). Differential monitoring in the use of abbreviated assessments is only intended to be used with programs that have had a history of sustained excellence.
This is a hypothetical example demonstrating the differences between an absolute and relative system (Differential Monitoring) to program monitoring. In the absolute system, no consideration is given to compliance histories and all providers receive the same monitoring services although 25% of them really need additional assistance and resources. In the relative system (Differential Monitoring) consideration is given to compliance histories and on this basis a certain percentage receive a Key Indicator/Abbreviated Monitoring visit. Time saved here is reallocated to the 25% who need the additional assistance & resources. 50% receive the same level of monitoring services because they are not eligible for Key Indicators nor are they considered problem providers.
Monitoring Tools

- 26 States use differential monitoring
  - Increased from 11 States in 2005
- Most States report using abbreviated compliance forms
- Nearly all States provide technical assistance during monitoring activities
  - 45 percent report assisting facilities to improve quality beyond licensing regulations

*National Center on Child Care Quality Improvement, Office of Child Care*
This slide poses some critical questions about what and who and how we monitoring programs. Are generalists better than specialists? Are general standards better than specific standards for each service type? Do we generate key indicators for each specific program area and use the key indicators as a screening tool? Or should the discussion be generalist + specialist rather than generalist or specialist?
This is a state example (Georgia) in how the differential monitoring model can be used.
Professional Development (PD)

- All staff have CDA or degrees in ECE.
- Director has BA in ECE.
- All staff take 24 hours of in-service training/yr.
- Mentoring of staff occurs.
- Training/PD fund for all staff.
- Professional development/training/technical assistance (PD) linked to Differential Monitoring (DM) results.

Professional Development (PD) key element listing some of the most important success indicators and the essential linkage between the professional development and the differential monitoring systems.
Mentoring
Individualized, on-site support to help child care staff implement the knowledge and skills they are receiving in classroom instruction.

Benefits:
- Building relationships.
- Effecting long term change in best practices.
- Providing a support system.

CAECTI Mentoring Programs.
These results are from an infant toddler teacher mentoring program demonstrating the relationship between program quality scores and teacher salaries.
These are the results from an infant toddler teacher mentoring program evaluation completed at Penn State University in 2001-2002 showing the positive gains on several program quality scales.
Graphical depiction of various mentoring (coaching) interventions. Obviously the more mentoring/coaching hours in the model produce the greatest gains but these are also the most costly programs.
This is the ultimate outcome, why we are working in the field. To produce positive outcomes for the children we serve. This is just a sampling of key success indicators for young children. We must be careful in targeting our interventions that are going to map to specific outcomes. Licensing maps well to the health and safety outcomes but not so much to the developmental outcomes; while Early Learning Systems or professional development systems would be a better match to developmental outcomes.

<table>
<thead>
<tr>
<th>Health and safety:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Immunizations (95%+)</td>
</tr>
<tr>
<td>Child well-being (90% of key indicators)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Developmental Outcomes:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social (90% meeting developmental benchmarks)</td>
</tr>
<tr>
<td>Emotional (90% meeting developmental benchmarks)</td>
</tr>
<tr>
<td>Cognitive (90% meeting developmental benchmarks)</td>
</tr>
<tr>
<td>Gross and fine motor (90% meeting developmental benchmarks)</td>
</tr>
</tbody>
</table>
These are the results of a child development outcome study comparing child development scales to quality measures, training measures, accreditation measures, and licensing measures.
Summary of various publications that are good examples of each of the key elements in the EQPQIM/DMLMA model either written by myself or others. Also see RIKI Website, CCEERC Website, and Scholar Website for additional examples.
Some of the outstanding issues that will need to be addressed in the next 5-10 years within early care and education program monitoring. These issues are from my 4 opinion papers (August-September 2014).

- Process versus Structural Quality Indicators
- Input/Processes versus Output/Outcomes
- Impact of Pre-K and QRIS on Licensing
- Inter-rater reliability still is a big issue contributing to inconsistent data collection.
Methodological Issues

- The need for states to routinely conduct reliability testing is vitally important to make sure that their licensing staff/inspectors are consistently measuring rules.
- The balancing between program compliance and program quality.
- Determining the most effective and efficient threshold is critical because as one becomes more efficient a loss of effectiveness does occur which can lead to an increase in false positives and negatives.

These methodological issues are taken from a re-draft of the NARA Licensing Curriculum chapter on Licensing Measurement, Regulatory Compliance and Systems.
These lessons learned are taken from a re-draft of the NARA Licensing Curriculum chapter on Licensing Measurement, Regulatory Compliance and Systems.
These future research studies are taken from a re-draft of the NARA Licensing Curriculum chapter on Licensing Measurement, Regulatory Compliance and Systems.
The relationship between regulatory compliance and quality is not linear.
Regulatory compliance has difficulty in distinguishing the best programs from the mediocre programs.
Regulatory compliance is very effective at identifying the worse programs.
There still is the need to balance regulatory compliance with quality indicators.
There is the need to validate differential monitoring approaches, such as risk assessment and key indicators.
What is the ideal threshold for the number of key indicator/predictor rules so that we can maintain a balance of program monitoring effectiveness and efficiency.
Risk assessment rules are usually in compliance because they place children at such risk of mortality or morbidity.
More recent risk assessment systems have two components: severity and probability of occurrence.
Key indicator/predictor rules are not usually in compliance but are not out of compliance a great deal.
What is it about key indicator/predictor rules that make them so effective in discriminating between high and low performing programs.
Licensing data are very skewed and because of this there is the need to dichotomize the data.
There is very little variance in licensing data with generally only 20 rules separating the top compliant programs from the lowest compliant programs.

Caring for Our Children Basics is a major step forward for the ECE field in establishing national standards.
ASPE and OCC have published two very important papers on program monitoring which provides best practices and states that have successfully used the various methodologies.
Key indicators represent 10% of all rules; risk assessment represent 20% of all rules.
Based upon my key indicator research in licensing (PC), quality rating and improvement systems (QRIS)(PQ), and professional development (PD) areas, these are the three key indicators that form a core set of indicators that drive ECE program quality. These are the most critical standards to have in place when it comes to program quality and where we should be targeting our resources.
Scientific Underpinnings for ECPQIM: Early Childhood Program Quality Indicator Model. This graphic shows the potential intersections amongst translational research, implementation science, and monitoring by the key concepts of public policy, empirical evidence, and interventions. It then depicts how ECPQIM fits at the heart of these intersections in identifying the key indicators in each of these areas. We will need to have discussions with other researchers about this schematic and see if it resonates with them or if I am missing something.
The relationship between public policy major events and the evolution of ECPQIM over its four generations. The various editions of ECPQIM reflect the emphasis of a strong Federal presence to a reduced Federal presence with an increased state presence. ECPQIM1 went from a strong Federal presence to a strong state presence. ECPQIM2-3 saw a strong state presence while ECPQIM4 saw a return of a balanced Federal and state presence.
Listing the previous generations of the Early Childhood Program Quality Indicator Model - ECPQIM Model.

The following graphics represent the previous generations of ECPQIM 1-4 beginning in 1975 up to the present model (DMLMA, 2013).
ECPQIM 0/1 – 1975-1994 – this was the initial model that Sue Aronson and I developed. Moves program monitoring from a qualitative approach to a quantitative approach.
ECPQIM 2 – 1995-1999 – Abbey Griffin and I expanded ECPQIM1 that took into account policy evaluation and planning at the state level. This version also put the model into a more systems orientation with Inputs, Processes and Outcomes.
ECPQIM 3 – 2000-2011 – this generation placed greater emphasis on PD – State Professional Development Systems; and QRIS – Quality Rating and Improvement Systems which did not exist when ECPQIM1 was created and proposed.
ECPQIM4/4+, DMLMA (4th generation of ECPQIM), unifies within a single program monitoring systems design the various key elements that impact on early care and education program quality. Generally this portion of the model is used with state agencies in describing how they can change their overall program monitoring system from an absolute, one size fits all to a relative/differential approach to monitoring. Risk assessment and key indicators are key elements of this model. It also introduces the need for doing validation studies for all the components and key elements based upon the *OPRE Research Brief on Validation* by Zellman & Fiene (2012).
Early Childhood Program Quality Improvement and Indicator Models (ECPQI2M©-4+)


ECPQI2M1©: 1975 – 1994. Qualitative to Quantitative; focus on reliability; data utilization; distinctions between program monitoring and evaluation; Key Indicators, Weighted Rules, & principles of licensing instrument design introduced. (Fiene, 1981; Fiene & Nixon, 1985).


ECPQI2M0-4©: Summary timeline and key elements of the 4 generations of ECPQI2M© along with my graduate studies (Dr. Frank Palmer) and pilot testing at a regional level. From this DM, KI, RA developed over time as indicated in the timeframes.
Related publications that I thought would be helpful for the reader to follow up with to gain more information about many of the concepts presented in this powerpoint. For more in-depth reading, the next slide provides links to the majority of the most important ECPQIM publications.

**RELATED PUBLICATIONS AND REPORTS**

- Fiene (2002b). Improving child care quality through an infant caregiver mentoring project, Child and Youth Care Forum, 31(2), 75-83.
Additional publications. These are bit older and give the historical perspective with the exception of the Zellman & Fiene (2012) Research Brief.
For the interested reader, please consult the following excellent publications by the Assistant Secretary’s Office for Planning and Evaluation, the Office of Child Care, and the National Resource Center for Health and Safety in Child Care that will provide additional insights into program monitoring in general, differential monitoring in particular, risk assessment and key indicator systems:

**ACF/Caring for Our Children Basics:**

**NRC/Stepping Stones to Caring for Our Children:**

**ASPE/Thirteen Key Indicators of Quality:**
http://aspe.hhs.gov/basic-report/13-indicators-quality-child-care

**ASPE/Monitoring White Paper:**
http://aspe.hhs.gov/hsp/15/ece_monitoring rpt_ece_monitoring.cfm

**OCC/Differential Monitoring, Risk Assessment and Key Indicators:**

Resources that I think are very important published by the Federal government and National Centers.
For getting in touch with me, seeing all the publications that support ECPQIM, especially this fourth (4th) generational approach to program monitoring. Go to the websites for additional information and examples.
The logo representing the new partnership between NARA and RIKI.
Early Childhood Program Quality Indicator and Improvement Model (ECPQIM) and Differential Monitoring Logic Model and Algorithm (DMLMA) Readings

Richard Fiene, Ph.D.
Early Childhood Program Quality Indicator and Improvement Model (ECPQIM) and Differential Monitoring Logic Model and Algorithm (DMLMA) Readings

Richard Fiene, Ph.D.

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Introduction

This research monograph provides research reports, papers, and technical notes supporting the Early Childhood Program Quality Indicator and Improvement Model (ECPQIM) and the Differential Monitoring Logic Model and Algorithm (DMLMA). The ECPQIM/DMLMA is now in its fourth edition and has been used in many contexts to improve regulatory compliance and quality in human service programs. The first edition appeared in 1985 and the most recent edition has been updated in 2013. Please see the References/Publications which has all the citations to these publications.

This monograph is organized into an initial introduction reading which provide or overview and framework for ECPQIM/DMLMA. This is followed by national examples of the use of the methodologies. State example reports are listed after the national examples. Some of the state examples provide the actual reports along with blueprint reports for developing the methodologies and examples from both child care and children’s services. After this section, quality examples are listed with Colorado’s QRIS and several reports of the Early Childhood Education Linkage System’s Infant Toddler Quality Improvement Project.

This is followed by a validation design and examples of validation studies conducted utilizing the ECPQIM/DMLMA model, in particular the Key Indicator methodology. Several papers follow that provide opinions and results from the ECPQIM model. This is followed by a couple of technical research notes. It is all wrapped up with some very short concluding comments.

Richard Fiene, Ph.D.
August 2016
DIFFERENTIAL MONITORING LOGIC MODEL (DMLM©): A NEW EARLY CHILDHOOD PROGRAM QUALITY INDICATOR MODEL (ECPQIM©) FOR EARLY CARE AND EDUCATION REGULATORY AGENCIES

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ABSTRACT

A new Early Childhood Program Quality Indicator Model (ECPQIM©) is described which utilizes targeted program monitoring (Differential Monitoring) via two licensing methodologies: Key Indicators and Risk Assessments. The theoretical and conceptual framework as well as a logic model are presented along with a scoring protocol that can be utilized to compare state/province and national organizations on how they are designing and implementing their program monitoring systems. A state/province/national framework/plan is presented as well as results from five (5) states (Georgia, Kansas, Illinois, Colorado, and New York) and a national organization (Office of Head Start). The five states and national organization are then compared using the Differential Monitoring Scoring Protocol (DMSP©). The Head Start program monitoring system scored a perfect 10 out of 10 in utilizing the DMSP©. Suggestions are made in how the scoring protocol could be used for making comparisons internationally and for future research in comparing various approaches.

Key Words: Program Monitoring, Differential Monitoring, Program Quality, Licensing.
Background

This paper will introduce a Differential Monitoring Logic Model (DMLM©) which provides a new Early Childhood Program Quality Indicator Model (ECPQIM⁴©) in which the major monitoring systems in early care and education are integrated conceptually so that the overall early care and education system can be assessed and validated. With this new model, it is now possible to compare results obtained from licensing systems, quality rating and improvement systems (QRIS), risk assessment systems, key indicator systems, technical assistance, and child development/early learning outcome systems (see Figures 1 & 2 for a graphical depiction of the theoretical underpinnings and actual design & logic model for the ECPQIM⁴©/DMLM).

The DMLM© can be used by early care and education state/province agencies, Federal agencies, and large provider organizations where an economy of scale is required. This model can be used with state as well as national standards, such as state licensing rules/regulations and Caring for Our Children (AAP, 2012). Most states and Federal agencies have either some or all of the key elements of this model in their overall monitoring systems. The purpose of this model is to alter a one-size fits all monitoring system to one that is targeted, spending more time with problem programs who need additional assistance. This is a cost neutral model that is both cost effective and efficient and re-allocates resources from the compliant programs to the non-compliant programs. Presently there is not a measurement rubric for making comparisons within the USA or internationally when it comes to measuring the effectiveness and efficiency of child care and
early care program monitoring systems. This can become a very important tool as the USA begins implementation of the re-authorization of the Child Care and Development Block Grant.

The ECPQIM©/DMLM© is based very heavily in translational research and implementation science as a means of building an ongoing program monitoring system based upon the latest empirical demonstrations in the early care and education research literature. It is at the intersection of child care public policy, early care and education interventions, and empirical research. The ECPQIM©/DMLM© along with the scoring protocol introduced in this paper could provide a framework for making comparisons amongst states/provinces, national organizations, and countries in how they have designed and implemented their respective program monitoring of child care and early care & education systems similar to how Child Care Aware has developed a reporting format for the USA in comparing states on regulatory and oversight functions. The author reported on such a comparison in a previous study in an earlier edition of this journal (Fiene, 2013). The DMLM© framework and scoring protocol could provide a similar measurement tool for assessing child care and early childhood education program monitoring systems.
DMLM© Key Elements (see Figure 2): CI = state or federal child care standards, usually rules or regulations that measure health and safety - *Caring for Our Children* (AAP, 2012) will be applicable here. PQ = Quality Rating and Improvement Systems (QRIS) standards at the state level; process quality measures. RA = risk assessment tools/systems in which only the most critical rules/standards are measured. *Stepping Stones* (NRC, 2013) is an example of this approach. KI = key indicators in which only predictor rules/standards are measured. The *Thirteen Indicators of Quality Child Care* (Fiene, 2002) is an example of this approach. DM = differential monitoring decision making in which it is determined if a program is in compliance or not and the number of visits/the number of rules/standards are ascertained from a scoring protocol. PD = technical assistance/training and/or professional development system which provides targeted assistance to the program based upon the DM results. CO = child outcomes which assesses how well the children are developing which is the ultimate goal of the system.

Insert Figure 2

Once the above key elements are in place, it is then possible to look at the relationships (this is depicted by the arrows that go from one box to another) amongst them to determine if the system is operating as it was intended; in other words, to determine if the DM system is improving the health, safety, program quality and ultimately the overall development of the children it serves.
In the Methodology section, a scoring protocol (DMSP© - Differential Monitoring Scoring Protocol©) is introduced which attempts to quantify these relationships and to give us a means for making measurements and comparisons across various types of organizations.

The DMLM© provides a cross-cutting methodology that can be used in all child care/early care and education delivery systems as well as in other human services. In the past many of these monitoring systems have functioned in silos. The DMLM© integrates all these various monitoring systems together so that the overall monitoring system can be validated as being cost effective and efficient. This can be an important development as available funds become more scarce in the future as international organizations deal with fewer and fewer resources.

Methods

National/State/Provincial Agency Plan for implementing a Differential Monitoring System:

The first step in utilizing the DMLM© for a state/province/nation is to take a close look at its Comprehensive Licensing Tool (CI) that it uses to collect violation data on all rules with all facilities in its respective state/province/nation. If the state/province/nation does not utilize a tool or checklist or does not review all violation data than it needs to consider these changes because the DMLM© is based upon an Instrument Based Program Monitoring System (IPM)(Fiene & Nixon, 1985) which utilizes tools/checklists to collect data on all rules.

The second step for the state/province/nation is to compare their nation’s/state’s/province’s rules
with the National *Health and Safety Performance Standards (Caring for Our Children)* (AAP, 2012) or an equivalent international set of standards to determine the overlap and coverage between the two.

The **third step** for the state/province/nation if it utilizes a Risk Assessment (RA) tool is to assess the relationship between this tool and *Stepping Stones* (NRC, 2013) or an equivalent international set of targeted standards to determine the overlap and coverage between the two.

The **fourth step** for the state/province/nation is to compare the results from the CI with the RA tools.

In the **fifth step**, if a state/province/nation is fortunate enough to have a QRIS – Quality Rating and Improvement System in place and has sufficient program quality (PQ) data available then they will have the ability to compare results from their CI tool with their PQ tool and validate outputs by determining the relationship between compliance with health and safety rules (CI) and program quality (PQ) measures that measure process quality. This is a very important step because very few empirical demonstrations appear in the research literature regarding this relationship.

The **sixth step** is for the state/province/nation to generate a Key Indicator (KI) tool from the CI data base. Please see Fiene & Nixon (1985) and Fiene & Kroh (2000) for a detailed explanation
of the methodology for generating a KI tool. If a state/province/nation did not want to use the KI methodology, a direct comparison could be drawn from The *Thirteen Indicators of Quality Child Care* (Fiene, 2002).

The **seventh step** for the state/nation is to use the RA and KI tools together to determine overall compliance of facilities and how often and which rules will be monitored for future visits. This is the basic component of a Differential Monitoring (DM) approach. Also, this step should drive decisions within the technical assistance/training/professional development (PD) system in what resources are allocated to a particular facility.

The **eighth and final step** for the state/nation is to compare the results from the various monitoring tools (CI, PQ, RA, KI) with any child development outcome (CO) data they collect. This is a relatively new area and few, if any, states/provinces/nations at this point have this capability on a large scale. However, as Early Learning Networks/Systems and Standards (ELS) are developed, this will become more common place.

The ECPQIM©DMLM© is presented without two additional items that were present in the 2012/2013 versions which are important to note. The algorithm (Fiene, 2012, 1013) and validation framework (Zellman & Fiene, 2012) are not presented because the author felt that these two components took away from a more direct presentation of differential monitoring. For those interested readers, please refer to my previous abstracts (Fiene, 2012, 2013) which
included the algorithm and validation frameworks.

Just another brief word about the Theoretical Underpinnings for ECPQIM\textsuperscript{4}. This graphic (Figure 1) attempts to provide the relationships amongst public policy, interventions, and empirical evidence through the lens of translational research, implementation science, and program monitoring. In constructing the ECPQIM\textsuperscript{4} concepts were borrowed from each area and integrated them in a model for monitoring early care and education programs. The graphic provides a means for displaying the relationships and potential intersections as well as the content that is important to each scientific/research field.

Figure 3 is provided as additional information regarding differential monitoring conceptually without all the details as in figure 2; and figure 4 is provided to demonstrate the impact that a state’s/provincial/national licensing law can have on using the Key Indicators and Risk Assessment methodologies.

Also, taking Figure 2 and attempting to quantify these relationships, a scoring protocol is proposed as depicted in Table 1. This can provide a numerical means of comparing various
differential monitoring systems and their relative comprehensiveness. This protocol could be a useful tool in future research for determining which combinations work best.

Insert Table 1

The next section provides the results from a national organization and five states who used the above methodology to implement their respective differential monitoring systems.

Results and Discussion

The Early Childhood Program Quality Indicator Model (ECPQIM©) and its latest iteration presented as a logic model: Differential Monitoring Logic Model (DMLM©) have been written about extensively by this author (Fiene & Nixon, 1985; Griffin & Fiene, 1996; Fiene & Kroh, 2000; Fiene, 2013). Several states and Head Start have used the model in order to re-align their program monitoring systems. This paper presents the results of those new program monitoring systems through the lenses of the ECPQIM©/DMLM© logic model display. Each particular approach used various components of the overall comprehensive national model and have been highlighted by connecting arrows. It is proposed that this approach could be applied at an international level as well.
The interested reader should obtain a copy of the Office of Child Care’s *Licensing Brief on Differential Monitoring, Risk Assessment, and Key Indicators* published by the National Center on Child Care Quality Improvements which gives additional details regarding these approaches and methodologies as well as other state examples. Please go to the following URL website: (https://childcareta.acf.hhs.gov/sites/default/files/1408_differential_monitoring_final_1.pdf). In fact, this paper builds upon that excellent *Licensing Brief*.

Let’s start with Figure 5 which provides the Comprehensive National Example that depicts all the possible interconnections and gives national examples from the research literature. As one will see, it is possible for a national organization or a state/provincial agency to select the various components from the model based upon what is available in their particular organization. All do have the program compliance/licensing component (PC) but not all have fully functional program quality initiatives (PQ) or do not have the data to draw from the program quality initiatives.

The next level of components are the key indicator (KI) and risk assessment (RA) approaches or methodologies which organizations or state agencies can use alone or in tandem. One limitation in the key indicator methodology is not to use it with program initiatives if the data are not severely skewed in their data distribution as is the case with licensing data.

The last component is the resulting differential monitoring (DM) approach based upon the results
from using the key indicator and risk assessment methodologies either alone or in tandem. This is the ultimate revision of the program monitoring system in which how often and what is reviewed are answered.

All the components are highlighted (this is indicated by the arrows going from one box to another) in Figure 5 because all are possibilities to be used by a national or state agency. The examples in Figure 5 are drawn from the national research literature so *Caring for Our Children* (AAP, 2012) is the example for Program Compliance, Licensing, and the Health & Safety Comprehensive Instrument (CI). The following examples in Figures 6-11 will show some differences in how national and state agencies have developed their respective differential monitoring systems through their use of key indicator (KI) and risk assessment (RA) methodologies, and linking their licensing/program compliance (PC) and program quality (PQ) initiatives. Tables 1-3 explain the scoring protocol and provide results from the national Head Start program and five states geographically dispersed around the USA (New York, Georgia, Illinois, Kansas, and Colorado). Also see the end of the paper for an explanation of Notes a,b,c in Figure 5.

__________________________________________

Insert Figure 5

__________________________________________
Figure 6 provides an example from New York (NY) where the state agency is attempting to restructure their early care and education program monitoring system to have a better balance between licensing and key program quality indicators. The plan is to have licensing staff collect data from both areas which means a need to save time in the licensing reviews via key indicators and to only identify indicators of quality through a risk assessment approach. The results from these two methodologies will then be combined into a Quality Indicators Instrument to be used by licensing staff in their annual reviews.

Figure 7 provides an example from Georgia (GA) in which the driving methodology is a risk assessment core rule review system that results in a differential monitoring system called the Annual Compliance Determination Worksheet (ACDW) approach. Key indicators are not used directly but were used as part of the risk assessment core rule development. Please note how the relationship amongst the various components is different from the NY approach delineated in Figure 6. There is a link to their program quality initiatives which proved very significant in the validation studies performed on their Core Rule differential monitoring system.
Figure 8 presents a very different approach from the previous two approaches. In Kansas’s (KS) case, the state agency was only interested in developing a key indicator approach and was not interested in risk assessment nor had the capability to tie data together from their program quality initiatives. This is noted by the arrow connections which is more minimal in this depiction. As one can see, this still is a viable option for developing a differential monitoring approach.

Figure 9 depicts the use of both key indicator and risk assessment methodologies in Illinois (IL) with their licensing system but no data interaction with their program quality initiatives. It is proposed that both methodologies will be used together in future licensing reviews of programs which will constitute their differential monitoring system approach.
Figure 10 depicts the new aligned differential monitoring system being employed in Head Start (HS). Head Start has a very comprehensive system that employs various aspects from all the components in their system. The Head Start Performance Standards are very comprehensive, CLASS is used as a major process quality measure and both a key indicator (Head Start Key Indicator – Compliance (HSKI-C)) and risk assessment (Selected Compliance Measures) are utilized in their program monitoring system. The Head Start new Aligned Program Monitoring system comes closest to the comprehensive national model.

In Figure 11 a very different scenario played out in the state of Colorado (CO) in which key indicators were developed for their QRIS system rather than for their licensing system. As mentioned earlier, when applying the key indicator methodology to Quality Initiatives one needs to be very cautious if the data distribution is not exceptionally skewed as is the case with licensing data. Some of the data were sufficiently skewed to be able to be used in generating
quality key indicators but there were limitations noted.

__________________________________________

Insert Figure 11

__________________________________________

The above results clearly demonstrate how agencies can take very different approaches to designing and implementing their differential monitoring system. The next research question is to determine if agencies that have higher scores (more than 6) if they are more effective and efficient than those agencies that have lower scores (less than 5).

Conclusion
This paper presents the latest examples of national and state agencies differential monitoring approaches. It clearly demonstrates that there are many different approaches to developing and implementing differential monitoring. A key research question for the future as more states utilize the different approaches is to study if one approach is better than the next or a combination works better than most. From 40+ years of experience as a researcher and state policy analyst I would suggest that a more comprehensive approach which employs the full menu of program quality initiatives similar to the Head Start or the New York approaches will be most effective.
As mentioned in the introduction of this paper in describing the Comprehensive National Example of the DMLM© Model Tables 1-3 present a Differential Monitoring Scoring Protocol (DMSP©) that can potentially be used to compare states on how in depth their differential monitoring system is. Table 1 describes the DMSP© in narrative terms delineating the various systems that need to be in place in order to get a particular score. A score of 0 means no systems are in place or do not intersect while a score of 10 means that all of the systems are in place and intersect or are linked. Table 2 gives the points assigned to the specific systems that are part of a differential monitoring system. And Table 3/Figure 12 give the actual points assigned to the state & national examples that have been presented in this paper for New York (NY), Georgia (GA), Head Start (HS), Kansas (KS), Illinois (IL), and Colorado (CO). The total points assigned to the comprehensive model are also provided as a point of context.

There are a couple of important things to note about the DMSP© in Table 2, such as: if Key Indicators (KI) and Risk Assessment (RA) are linked, it negates KI and RA being scored separately. If KI and RA are developed separately, it is very improbable that they will not be linked but that is always a possibility, so it is listed as so. Linking Program Compliance/Licensing (PC) and Program Quality (PQ) Initiatives is a highly desirable event and is assigned a high score (4 points). Linking KI and RA is also considered a highly desirable event and is assigned a high score (4 points).
Insert Tables 2 & 3 and Figure 12

For future research, it will be interesting to see if this ECPQIM©/DMLM© model has applicability from an international perspective. Some of the key elements present in USA state systems are organized very differently in other countries and would have to be adjusted. Also, it will be interesting to see if the DMSP© can be developed as a scoring systems similar to the Child Care Aware Report Card Benchmarks protocol where it will be possible to make comparisons across state and national agencies.
Endnotes a, b, c:

The arrows going from Key Indicators (KI) and Risk Assessment (RA) to Differential Monitoring (DM) can be configured in the following ways: only KI (Kansas); only RA (don’t have an example of this as of this writing) or a combination of KI and RA (Illinois) but this configuration could mean all of the KI and RA rules which would be more rules than if only KI or RA rules were selected or only those rules that overlap (KI+RA) which would be a much reduced number of rules. Or a different configuration determined by the state agency.
References


Figure 1

The Theoretical Underpinnings for ECPQIM©: Early Childhood Program Quality Indicator Model©
Figure 2

Early Childhood Program Quality Indicator Model (ECPQIM4©): Differential Monitoring Logic Model (DMLM©)

Comprehensive National Example

Program Compliance (PC)
- Full Licensing Visit
- Comprehensive Instrument/Tool (CI)
- Health & Safety
- Structural Quality
  
  *Eg: Caring for Our Children (CFOC)*

Program Quality (PQ) Initiatives:
- Quality Rating & Improvement (QRIS)
- Professional Development (PD)
- Early Learning System (ELS)
- Process Quality
  
  *Eg: Classroom Assessment Scoring System*

Key Indicators (KI) – Abbreviated Visit

- Statistical predictor rules/standards that predict overall compliance with rules or standards.
  
  *Eg: 13 Indicators of Quality Child Care*

Risk Assessment (RA) – Abbreviated Visit

- Weighting of Rules or Standards
- Places children at greatest risk of mortality or morbidity if non-compliance found.
  
  *Eg: Stepping Stones to CFOC*

Differential Monitoring (DM): How often to visit – More or Less? And what is reviewed – More or Less? Time saved on the compliant programs can be used with the non-compliant programs. This should create a more cost effective and efficient program monitoring system with targeted reviews which should ultimately lead to better outcomes (CO) for the children and their families served in the programs.
Figure 3
Licensing Rules, Compliance Reviews, Differential Monitoring, Abbreviated Tools, Risk Assessment, and Key Indicators

All Licensing Rules – Full Compliance Reviews

Differential Monitoring

How Often to Visit? What is Reviewed?

Frequency

More Often Less Often

Abbreviated Tool

Risk Assessment Weights Key Indicators Predictors
**Figure 4**

*When Key Indicators and Risk Assessments Can Be Used*

The Licensing Law:

All Rules that are promulgated based upon the Law

Compliance Decision:

- **100% compliance with all rules all the time.**
  - Key Indicators are ok to use.
  - Risk Assessment CANNOT be used.

Compliance Decision:

- **Substantial (96-99%) but not 100% compliance with all rules all the time.**
  - Key Indicators are ok to use.
  - Risk Assessment ok to use.

**Figure 5**

- **Program Compliance (PC)**
  - Full Licensing Visit
  - Comprehensive Instrument (CI)
  - Health & Safety
  - Structural Quality
  - *Eg: Caring for Our Children (CFOC)*

  ![Diagram](image)

- **Program Quality (PQ) Initiatives:**
  - Quality Rating & Improvement (QRIS)
  - Professional Development (PD)
  - Early Learning System (ELS)
  - Process Quality
  - *Eg: Early Childhood Environment Rating Scale*

- **Key Indicators (KI) – Abbreviated Visit**
  - Statistical predictor rules/standards that predict overall compliance with rules or standards.
  - *Eg: 13 Indicators of Quality Child Care*

- **Risk Assessment (RA) – Abbreviated Visit**
  - Weighting of Rules or Standards
  - Places children at greatest risk of mortality or morbidity if non-compliance found.
  - *Eg: Stepping Stones to CFOC*

- **Differential Monitoring (DM):**
  - How often to visit – More or Less? And what is reviewed – More or Less? Time saved on the compliant programs can be used with the non-compliant programs. This should create a more cost effective and efficient program monitoring system with targeted reviews which should ultimately lead to better outcomes (CO) for the children and their families served in the programs.
**Program Compliance (PC)**
- Full Licensing Visit
- Comprehensive Instrument (CI)
- Health & Safety
- Structural Quality
  *Eg: New York Licensing Rules*

**Program Quality (PQ) Initiatives:**
- Quality Rating & Improvement (QRIS)
- Professional Development (PD)
- Early Learning System (ELS)
- Process Quality
  *Eg: Early Childhood Environment Rating Scale*

**Key Indicators (KI) – Abbreviated Visit**
- Statistical predictor rules/standards that predict overall compliance with rules or standards.
  *Eg: New York Key Indicators*

**Risk Assessment (RA) – Abbreviated Visit**
- Weighting of Rules or Standards
- Places children at greatest risk of mortality or morbidity if non-compliance found.
  *Eg: Selected Quality Indicators*

**Differential Monitoring (DM):** How often to visit – More or Less? And what is reviewed – More or Less? Time saved on the compliant programs can be used with the non-compliant programs. This should create a more cost effective and efficient program monitoring system with targeted reviews which should ultimately lead to better outcomes (CO) for the children and their families served in the programs.
(ECPQIM4©)(DMLM©): Georgia Example (GA)

**Figure 7**

**Program Compliance (PC)**
- Full Licensing Visit
- Comprehensive Instrument (CI)
- Health & Safety
- Structural Quality
  - *Eg: Georgia Licensing Rules*

**Program Quality (PQ) Initiatives:**
- Quality Rating & Improvement (QRIS)
- Professional Development (PD)
- Early Learning System (ELS)
- Process Quality
  - *Eg: Early Childhood Environment Rating Scale*

**Key Indicators (KI)** – Abbreviated Visit
- Statistical predictor rules/standards that predict overall compliance with rules or standards.
  - *Eg: 13 Indicators of Quality Child Care*

**Risk Assessment (RA)** – Abbreviated Visit
- Weighting of Rules or Standards
- Places children at greatest risk of mortality or morbidity if non-compliance found.
  - *Eg: Core Rules*

**Differential Monitoring (DM):** How often to visit – More or Less? And what is reviewed – More or Less? Time saved on the compliant programs can be used with the non-compliant programs. This should create a more cost effective and efficient program monitoring system with targeted reviews which should ultimately lead to better outcomes (CO) for the children and their families served in the programs.
  - *Eg: Annual Compliance Determination Worksheet (ACDW)*
(ECPQIM4©)(DMLM©): Kansas Example (KS)

Figure 8

Program Compliance (PC)
- Full Licensing Visit
- Comprehensive Instrument (CI)
- Health & Safety
- Structural Quality
  *Eg: Kansas Licensing Rules*

Program Quality (PQ) Initiatives:
- Quality Rating & Improvement (QRIS)
- Professional Development (PD)
- Early Learning System (ELS)
- Process Quality

Key Indicators (KI) – Abbreviated Visit
- Statistical predictor rules/standards that predict overall compliance with rules or standards.
  *Eg: Kansas Key Indicators*

Risk Assessment (RA) – Abbreviated Visit
- Weighting of Rules or Standards
- Places children at greatest risk of mortality or morbidity if non-compliance found.

Differential Monitoring (DM): How often to visit – More or Less? And what is reviewed – More or Less? Time saved on the compliant programs can be used with the non-compliant programs. This should create a more cost effective and efficient program monitoring system with targeted reviews which should ultimately lead to better outcomes (CO) for the children and their families served in the programs.
Program Compliance (PC)
Full Licensing Visit
Comprehensive Instrument (CI)
Health & Safety
Structural Quality
*Eg: Illinois Licensing Rules*

Program Quality (PQ) Initiatives:
Quality Rating & Improvement (QRIS)
Professional Development (PD)
Early Learning System (ELS)
Process Quality

Key Indicators (KI) – Abbreviated Visit
Statistical predictor rules/standards that predict overall compliance with rules or standards.
*Eg: Illinois Key Indicators*

Risk Assessment (RA) – Abbreviated Visit
Weighting of Rules or Standards
Places children at greatest risk of mortality or morbidity if non-compliance found.
*Eg: Illinois Weighting Consensus*

Differential Monitoring (DM): How often to visit – More or Less? And what is reviewed – More or Less? Time saved on the compliant programs can be used with the non-compliant programs. This should create a more cost effective and efficient program monitoring system with targeted reviews which should ultimately lead to better outcomes (CO) for the children and their families served in the programs.
Program Compliance (PC)
Full Review Visit
Comprehensive Instrument (CI)
All Compliance Measures
Structural Quality
*Eg: Head Start Performance Standards*

Program Quality (PQ) Initiatives:
Professional Development (PD)
Early Learning System (ELS)
Process Quality
*Eg: Classroom Assessment Scoring System*

Key Indicators (KI) – Abbreviated Visit
Statistical predictor rules/standards that predict overall compliance with rules or standards.
*Eg: Head Start Key Indicators-Compliance*

Risk Assessment (RA) – Abbreviated Visit
Weighting of Rules or Standards
Places children at greatest risk of mortality or morbidity if non-compliance found.
*Eg: Selected Compliance Measures*

Differential Monitoring (DM): How often to visit – More or Less? And what is reviewed – More or Less? Time saved on the compliant programs can be used with the non-compliant programs. This should create a more cost effective and efficient program monitoring system with targeted reviews which should ultimately lead to better outcomes (CO) for the children and their families served in the programs.
**Program Compliance (PC)**
- Full Licensing Visit
- Comprehensive Instrument (CI)
- Health & Safety
- Structural Quality

**Program Quality (PQ) Initiatives:**
- Quality Rating & Improvement (QRIS)
- Professional Development (PD)
- Early Learning System (ELS)
- Process Quality
  
  *Ea: Early Childhood Environment Rating*

**Key Indicators (KI) – Abbreviated Visit**
Statistical predictor rules/standards that predict overall compliance with rules or standards.

*Eg: Colorado Quality Key Indicators*

**Risk Assessment (RA) – Abbreviated Visit**
Weighting of Rules or Standards
Places children at greatest risk of mortality or morbidity if non-compliance found.

**Differential Monitoring (DM):** How often to visit – More or Less? And what is reviewed – More or Less? Time saved on the compliant programs can be used with the non-compliant programs. This should create a more cost effective and efficient program monitoring system with targeted reviews which should ultimately lead to better outcomes (CO) for the children and their families served in the programs.
DMSP® SCORING PROTOCOL WITH STATE AND NATIONAL AGENCIES AS EXAMPLES

Figure 12

10 POINTS

ALL SYSTEMS IN PLACE AND LINKED.

Example
HEAD START

8 POINTS
KI & RA IN PLACE BUT NOT LINKED; AND PC & PQ LINKED.

Example
Georgia

6 POINTS
KI & RA IN PLACE & LINKED.

Example
Illinois

Example
New York

4 POINTS
KI & RA IN PLACE BUT NOT LINKED OR PC & PQ LINKED.

Example
Colorado

Example
Kansas

2 POINTS
KI OR RA IN PLACE.

0 POINTS
NO SYSTEMS

SCORING

KI = Key Indicators; RA = Risk Assessment; PC = Licensing; PQ = Program Quality Initiatives
Table 1: Differential Monitoring Scoring Protocol (DMSP)

<table>
<thead>
<tr>
<th>Score</th>
<th>Systems Present</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>No systems in place.</td>
</tr>
<tr>
<td>2</td>
<td>KI or RA in place and not linked.</td>
</tr>
<tr>
<td>4</td>
<td>(KI &amp; RA in place but not linked) or (PC + PQ are linked).</td>
</tr>
<tr>
<td>6</td>
<td>(KI &amp; RA in place) &amp; (KI + RA are linked)</td>
</tr>
<tr>
<td>8</td>
<td>(KI &amp; RA in place but not linked) &amp; ((PC + PQ) are linked).</td>
</tr>
<tr>
<td>10</td>
<td>All systems in place and linked.</td>
</tr>
</tbody>
</table>

KI (Key Indicators); RA (Risk Assessment); PC (Program Compliance/Licensing); PQ (Program Quality Initiatives)
Table 2: Differential Monitoring Scoring Protocol (DMSP)© Point Assignment

<table>
<thead>
<tr>
<th>Score</th>
<th>Systems Present and Point Assignment</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>No systems in place.</td>
</tr>
<tr>
<td>2</td>
<td>(KI (1)) &amp; (KI -&gt; DM (1)) or ((RA (1)) &amp; (RA -&gt; DM (1))</td>
</tr>
<tr>
<td>4</td>
<td>(PC + PQ (4)) or (KI (1) &amp; (KI -&gt; DM (1)) &amp; (RA (1) &amp; (RA -&gt; DM (1))</td>
</tr>
<tr>
<td>6</td>
<td>(KI + RA -&gt; DM (4)) &amp; (KI (1)) &amp; (RA (1))</td>
</tr>
<tr>
<td>8</td>
<td>(KI (2) &amp; RA (2)) &amp; (PC + PQ (4))</td>
</tr>
<tr>
<td>10</td>
<td>(KI + RA -&gt; DM (4)) &amp; (KI (1)) &amp; (RA (1)) &amp; (PC + PQ (4))</td>
</tr>
</tbody>
</table>

KI (Key Indicators); RA (Risk Assessment); PC (Program Compliance/Licensing); PQ (Program Quality Initiatives)
Table 3: DMLM© SCORING PROTOCOL WITH STATE EXAMPLES

<table>
<thead>
<tr>
<th>SYSTEMS (pts)</th>
<th>MODEL</th>
<th>GA</th>
<th>NY</th>
<th>HS</th>
<th>IL</th>
<th>KS</th>
<th>CO</th>
</tr>
</thead>
<tbody>
<tr>
<td>KI (1)</td>
<td>1</td>
<td>-</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>RA (1)</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>KI + RA -&gt; DM (4)</td>
<td>4</td>
<td>2</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>KI + RA (2)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PC + PQ (4)</td>
<td>4</td>
<td>4</td>
<td>-</td>
<td>4</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>KI -&gt; DM (1)</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>RA -&gt; DM (1)</td>
<td>-</td>
<td>1</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>TOTAL (10)</td>
<td>10</td>
<td>8</td>
<td>6</td>
<td>10</td>
<td>6</td>
<td>2</td>
<td>2</td>
</tr>
</tbody>
</table>

GA (Georgia); NY (New York); HS (Head Start); IL (Illinois), KS (Kansas); CO (Colorado)
The purpose of this report is to present to the Office of Head Start (OHS) Key Indicators of their Head Start Performance Standards (HSPS) that have the ability to statistically predict substantial compliance with all Compliance Measures and ultimately the majority of HSPS's. The analytical and methodological basis of this approach is based upon a Differential Monitoring Logic Model and Algorithm (DMLMA©) (Fiene, 2012) (see Appendix 3). The DMLMA© is the 4th generation of an Early Childhood Program Quality Indicator Model (ECPQIM)(Fiene & Nixon, 1985; Griffin & Fiene, 1995; Fiene & Kroh, 2000). Only a portion of the DMLMA© model was utilized in this report which focused on key indicators, risk assessment, and program quality.

Definitions:

Risk Assessment (RA) - a differential monitoring approach that employs using only those rules, standards, or regulations that place children at greatest risk of mortality or morbidity if violations/citations occur with the specific rule, standard, or regulation.

Key Indicators (KI) - a differential monitoring approach that employs using only those rules, standards, or regulations that statistically predict overall compliance with all the rules, standards, or regulations. In other words, if a program is 100% in compliance with the Key Indicators the program will also be in substantial to full compliance with all rules, standards, or regulations. The reverse is also true in that if a program is not 100% in compliance with the Key Indicators the program will also have other areas of non-compliance with all the rules, standards, or regulations.

Differential Monitoring (DM) - this is a relatively new approach to determining the number of visits made to programs and what rules, standards, or regulations are reviewed during these visits. There are two measurement tools that drive differential monitoring, one is Weighted Risk Assessment tools and the other is Key Indicator checklists. Weighted Risk Assessments determine how often a program will be visited while Key Indicator checklists determine what rules, standards, or regulations will be reviewed in the program. Differential monitoring is a very powerful approach when Risk Assessment is combined with Key Indicators because a program is reviewed by the most critical rules, standards, or regulations and the most predictive rules, standards, or regulations. See Appendix 3 which presents a Logic Model & Algorithm for Differential Monitoring (DMLMA©)(Fiene, 2012).

Program Quality (PQ) - for the purposes of this study this was measured via the CLASS – Classroom Assessment Scoring System. The CLASS has three sub-scales (ES = Emotional Support, CO = Classroom Organization, and IS = Instructional Support). The CLASS is a tool that is identified in the research literature as measuring classroom quality similar to the ERS tools.
Early Childhood Program Quality Indicator Model (ECPQIM) – these are models that employ a key indicator or dashboard approach to program monitoring. Major program monitoring systems in early care and education are integrated conceptually so that the overall early care and education system can be assessed and validated. With these models, it is possible to compare results obtained from licensing systems, quality rating and improvement systems (QRIS), risk assessment systems, key indicator systems, technical assistance, and child development/early learning outcome systems. The various approaches to validation are interposed within this model and the specific expected correlational thresholds that should be observed amongst the key elements of the model are suggested. Key Elements of the model are the following (see Appendix 3 for details): CI = state or federal standards, usually rules or regulations that measure health and safety - Caring for Our Children or Head Start Performance Standards will be applicable here. PQ = Quality Rating and Improvement Systems (QRIS) standards at the state level; ERS (ECERS, ITERS, FDCRS), CLASS, or CDPES (Fiene & Nixon, 1985). RA = risk assessment tools/systems in which only the most critical rules/standards are measured. Stepping Stones is an example of this approach. KI = key indicators in which only predictor rules/standards are measured. The Thirteen Indicators of Quality Child Care is an example of this approach. DM = differential monitoring decision making in which it is determined if a program is in compliance or not and the number of visits/the number of rules/standards are ascertained from a scoring protocol. PD = technical assistance/training and/or professional development system which provides targeted assistance to the program based upon the DM results. CO = child outcomes which assesses how well the children are developing which is the ultimate goal of the system.

The organization of this report is as follows:

1) The first section will provide an overall analysis the Head Start (HS), Early Head Start (EHS), and Head Start/Early Head Start (HS/EHS) programs \(^1\);  
2) The second section will provide analyses of the various content areas (CA) within the HSPS \(^4\);  
3) The third section will provide analyses of the relationship between the HSPS as measured by compliance with the Compliance Measures (CM) and the program quality scores (CLASS scores) \(^3\);  
4) The fourth and final section will provide the analyses that produced the key indicators (KI) and recommendations in how it could be used \(^2\).

The source of data for this report is all the Tri-Annual On-Site Monitoring visits for 2012 which consisted of 422 reviews of programs across the country. There were 191 Head Start (HS) only programs, 33 Early Head Start (EHS) only programs, and 198 Head Start/Early Head Start (HS/EHS) programs reviewed. This is a representative sample of Head Start and Early Head Start programs nationally representing approximately 25% of the total number of Head Start programs.

Before proceeding with the results of this study, a few clarifying and definitional terms need to be highlighted. In the 2012 edition of OHS On-Site Review Protocol and the 2013 OHS Monitoring Protocol, Compliance Indicators (CI) and Key Indicators (KI) are respectively mentioned. In the licensing literature, when the term “Indicators” is used it refers to standards/rules that are predictive of overall compliance with all rules/standards. However, as defined by OHS, indicators (CI/KI) are used within the context of risk assessment which means that these indicators are the standards which are most important/critical.
to the OHS in their monitoring reviews. These indicators therefore are not predictive in essence. That is the focus of this report/study which is to determine which of these indicators are predictive of overall compliance with all the compliance/key indicators. This is a common misconception in the human service regulatory field where risk assessment tools and key indicator tools purposes are confused. As we move forward please keep the definitions in mind related to the distinctions and functionality of risk assessment and key indicators.

For the purposes of this study, 131 Compliance Measures (CM), organized into seven (7) Content Areas (CA), were reviewed and analyzed. The seven content areas are the following: Program Governance; Management Systems; Fiscal Integrity; Eligibility, Recruitment, Selection, Enrollment, and Attendance; Child Health and Safety; Family and Community Engagement; Child Development and Education. Ten CM’s were from Program Governance (GOV), 10 were from Management Systems (SYS), 22 were from Fiscal Integrity (FIS), 11 were from Eligibility, Recruitment, Selection, Enrollment, and Attendance (ERSEA), 34 were from Child Health and Safety (CHS), 16 were from Family and Community Engagement (FCE), and 28 were from Child Development and Education (CDE).

Section 1 - Head Start (HS), Early Head Start (EHS), and Head Start/Early Head Start (HS/EHS) programs

In order to determine if analyses needed to be performed separately on Head Start (HS), Early Head Start (EHS), and Head Start/Early Head Start (HS/EHS) combined programs, the first series of analyses were performed to determine if any statistically significant differences existed amongst these three groups. This is a very important first analysis because it will help to determine the stability of the sample selected and of the overall system. In other words, is there a good deal of consistency across all service types: HS, EHS, and HS/EHS.

Based upon Table 1, no statistically significant differences were determined amongst the three groups (HS, EHS, HS/EHS) with Compliance Measures (CM) or CLASS (ES, CO, IS) Scores indicating that using the full 422 sample and not having to do separate analyses for the three groups was the correct analytical framework. However, where it is appropriate, any statistically significant differences amongst the various program types will be highlighted.

Table 1 – Head Start, Early Head Start, & Head Start/Early Head Start With CM and CLASS/ES, CO, IS

<table>
<thead>
<tr>
<th>Program Type</th>
<th>CM(N)</th>
<th>CLASS/ES(N)</th>
<th>CLASS/CO(N)</th>
<th>CLASS/IS(N)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Head Start (HS)</td>
<td>3.72(191)</td>
<td>5.88(186)</td>
<td>5.43(186)</td>
<td>2.97(186)</td>
</tr>
<tr>
<td>Early Head Start (EHS)</td>
<td>2.67(33)</td>
<td>-----*</td>
<td>-----*</td>
<td>-----*</td>
</tr>
<tr>
<td>Head Start (HS/EHS)</td>
<td>3.07(198)</td>
<td>5.91(198)</td>
<td>5.47(198)</td>
<td>3.00(198)</td>
</tr>
<tr>
<td>Totals</td>
<td>3.33(422)</td>
<td>5.89(384)</td>
<td>5.45(384)</td>
<td>2.98(384)</td>
</tr>
<tr>
<td>Statistical Significance</td>
<td>NS</td>
<td>NS</td>
<td>NS</td>
<td>NS</td>
</tr>
</tbody>
</table>

CM = Compliance Measures (Average Number of Violations)
CLASS/ES = CLASS Emotional Support Average Score
CLASS/CO = CLASS Classroom Organization Average Score
CLASS/IS = CLASS Instructional Support Average Score
NS = Not Significant
N = Number of Programs
*CLASS data were not collected in EHS.
The average number of violations with the Compliance Measures for Head Start (3.72), Early Head Start (2.67) and Head Start/EHS (3.07) was not significant in utilizing a One-Way ANOVA. There were 191 Head Start (HS) programs, 33 Early Head Start (EHS) programs, and 198 Head Start (HS/EHS) programs.

Comparisons were also made with Head Start and Head Start/EHS on the various CLASS sub-scales (ES = Emotional Support, CO = Classroom Organization, and IS = Instructional Support) and no significant differences were found between these two groups. The EHS (n = 33) was not used because CLASS data were not collected in these programs.

The practical implication of the above results is that the same monitoring tools and the resulting Head Start Key Indicator (HSKI) to be developed as a result of this study can be used in the three main types of programs: Head Start, Early Head Start, and Head Start/EHS. There is no need to have separate tools.

Section 2 - Content Areas

The second series of analyses was to look more closely at the 7 content areas (CA) to measure demographically any differences amongst the various areas. In order to do this a weighted average had to be determined in order to compare the various areas because of the differences in the number of Compliance Measures (CM) used in each content area. Table 2 provides the results of these analyses. For the total sample of 422 sites, Management Systems (SYS) Content Area (CA) had the highest number of violations with the Compliance Measures (CM) with 359. The SYS/CA also had the highest average number of violations with 35.90 because there were only 10 CM. For the total sample of 422 sites, the lowest number of violations was in the Family and Community Engagement (FCE) Content Area (CA) with 48 violations with CM. It also had the lowest average number of violations with 3.00.

For the Head Start only sites (n = 191), a similar distribution as with the total sample (n = 422) is depicted in which Management Systems (SYS) Content Area (CA) had the highest number of violations with the Compliance Measures (CM) with 192. The SYS/CA also had the highest average number of violations with 19.20 because again there were only 10 CM. The lowest number of violations was in the Family and Community Engagement (FCE) Content Area (CA) with 20 violations with CM. It also had the lowest average number of violations with 1.25.

For the Early Head Start only (n = 33) and the Head Start/Early Head Start (n = 198) sites, the ranking of the various Content Areas changed somewhat with the total number of violations and the average number of violations from the Total Sample (n = 422) and the Head Start only (n = 191) sites but not dramatically. For example, the Family and Community Engagement (FCE); Child Development and Education (CDE); and the Eligibility, Recruitment, Selection, Enrollment, and Attendance (ERSEA) Content Areas switched rankings in which it had the fewest total violations and the average number of violations (see Table 2).
Table 2 – Comparing Content Areas and Program Types

<table>
<thead>
<tr>
<th>Content Areas (CA)</th>
<th>Total Violations/(Rank)</th>
<th>Average # of Violations/(Rank)</th>
<th>CM</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>TOT</td>
<td>HS</td>
<td>EHS</td>
</tr>
<tr>
<td>FCE</td>
<td>48(1)</td>
<td>20(1)</td>
<td>2(1)</td>
</tr>
<tr>
<td>ERSEA</td>
<td>62(2)</td>
<td>37(2)</td>
<td>6(3)</td>
</tr>
<tr>
<td>CDE</td>
<td>91(3)</td>
<td>43(3)</td>
<td>5(2)</td>
</tr>
<tr>
<td>GOV</td>
<td>150(4)</td>
<td>94(4)</td>
<td>6(3)</td>
</tr>
<tr>
<td>FIS</td>
<td>255(5)</td>
<td>114(5)</td>
<td>23(7)</td>
</tr>
<tr>
<td>CHS</td>
<td>333(6)</td>
<td>151(6)</td>
<td>22(6)</td>
</tr>
<tr>
<td>SYS</td>
<td>359(7)</td>
<td>192(7)</td>
<td>20(5)</td>
</tr>
</tbody>
</table>

**CONTENT AREAS (CA):**
- FCE = FAMILY and COMMUNITY ENGAGEMENT
- ERSEA = ELIGIBILITY, RECRUITMENT, SELECTION, ENROLLMENT, and ATTENDANCE
- CDE = CHILD DEVELOPMENT AND EDUCATION
- GOV = PROGRAM GOVERNANCE
- FIS = FISCAL INTEGRITY
- CHS = CHILD HEALTH AND SAFETY
- SYS = MANAGEMENT SYSTEMS

**TOT = TOTAL NUMBER OF SITES, FULL SAMPLE OF 422 SITES**
**HS = HEAD START ONLY PROGRAMS**
**EHS = EARLY HEAD START ONLY PROGRAM**
**HS/EHS = HEAD START AND EARLY HEAD START COMBINED PROGRAMS**
**CM = NUMBER OF COMPLIANCE MEASURES**

**TOTAL VIOLATIONS = ALL THE VIOLATIONS FOR A SPECIFIC CONTENT AREA.**
**AVERAGE # OF VIOLATIONS = THE TOTAL VIOLATIONS FOR A SPECIFIC CA DIVIDED BY THE NUMBER OF COMPLIANCE MEASURES FOR THAT SPECIFIC CONTENT AREA.**
**RANK = HOW EACH CONTENT AREA COMPARES TO THE OTHER CONTENT AREAS FOR THE RESPECTIVE PROGRAM TYPE.**

For the total sample (n = 422), other CA’s had different configurations between the total number of violations and the average number of violations as demonstrated by CHS – Child Health and Safety in which there was a total of 333 violations but the average number of violations was 9.79 because there were 34 Compliance Measures (CM). Program Governance (GOV) had 150 total violations and a weighted-average of 15 violations with 10 CM. Child Development and Education (CDE) had 91 total violations and a weighted-average of 3.25 violations. Fiscal Integrity (FIS) had 255 total violations and a weighted-average of 11.59 violations. And lastly, Eligibility, Recruitment, Selection, Enrollment, and Attendance (ERSEA) had 62 total violations and a weighted-average of 5.64 violations.

The Head Start only (HS = 191), Early Head Start only (EHS = 33), and the Head Start/Early Head Start (HS/EHS = 198) programs followed a similar pattern as with the total sample (n = 422). This indicates a great deal of consistency in the sample drawn. See Appendix 4 for violation data for all 131 Compliance Measures.

The practical implication of the above findings is that certain Content Areas (SYS, GOV, FIS) may need additional exploration by OHS because of their high rates of non-compliance with the Compliance Measures.
Section 3 – Program Quality

This section provides comparisons between the Compliance Measures (CM) data and the CLASS (ES, CO, IS) data. This is a very important section because there is always the concern that compliance with the HSPS has no relationship to program quality as measured by the CLASS. In Table 3, correlations were run between the CM data and the CLASS scores for Emotional Support (ES), Classroom Organization (CO), and Instruction Support (IS) for the Head Start only and the Head Start/Early Head Start programs. The EHS only programs were not included because CLASS data are not collected on these programs. The results are very positive and statistically significant in most cases. It is also important to note the very positive correlation between the Head Start Key Indicators (HSKI\(^2\)) and CLASS. This result supports using the HSKI in monitoring Head Start.

Table 3 – Relationship Between Compliance Measures (CM), KI, and CLASS (ES, CO, IS) Scores

<table>
<thead>
<tr>
<th>Compliance Measures Content Areas</th>
<th>Key Indicators</th>
</tr>
</thead>
<tbody>
<tr>
<td>CLASS/ES</td>
<td>.22**</td>
</tr>
<tr>
<td>CLASS/CO</td>
<td>.19**</td>
</tr>
<tr>
<td>CLASS/IS</td>
<td>.20**</td>
</tr>
<tr>
<td>CM</td>
<td>FCE</td>
</tr>
<tr>
<td>ERSEA</td>
<td>.13*</td>
</tr>
<tr>
<td>CDE</td>
<td>.15**</td>
</tr>
<tr>
<td>GOV</td>
<td>.11*</td>
</tr>
<tr>
<td>FIS</td>
<td>.05</td>
</tr>
<tr>
<td>CHS</td>
<td>.23**</td>
</tr>
<tr>
<td>SYS</td>
<td>.17**</td>
</tr>
<tr>
<td>KI</td>
<td>.27**</td>
</tr>
<tr>
<td>CM Violations = Total Compliance Measure Violations</td>
<td></td>
</tr>
</tbody>
</table>

**CONTENT AREAS (CA):**
- FCE = FAMILY and COMMUNITY ENGAGEMENT
- ERSEA = ELIGIBILITY, RECRUITMENT, SELECTION, ENROLLMENT, and ATTENDANCE
- CDE = CHILD DEVELOPMENT AND EDUCATION
- GOV = PROGRAM GOVERNANCE
- FIS = FISCAL INTEGRITY
- CHS = CHILD HEALTH AND SAFETY
- SYS = MANAGEMENT SYSTEMS

**CLASS/IS = Average CLASS IS (Instructional Support) Score**
**CLASS/ES = Average CLASS ES (Emotional Support) Score**
**CLASS/CO = Average CLASS CO (Classroom Organization) Score**

**KI = Key Indicators Total Score**
- **p < .01**
- *p < .05*

See Appendix 6 & 6A for the inter-correlations amongst all the Content Areas, HSKI, and Total Compliance with Compliance Measures.

These results are very important but it is equally important to look more specifically at the distribution of the Compliance Measures (CM) scores and their relationship to the CLASS data (see Appendix 5 for detailed graphic distributions and Appendix 6 & 6A for the inter-correlations amongst all the CA). When this is done a very interesting trend appears (see Table 3a) in which a definite plateau occurs as the scores move from more violations or lower compliance with the Compliance Measures (25-20 to 3-8 CM Violations) to fewer violations or substantial compliance with the Compliance Measures (1-2 CM Violations) and full compliance with the Compliance Measures (Zero (0) CM Violations).
Table 3a – Aggregate Scores Comparing CM Violations with CLASS Scores

<table>
<thead>
<tr>
<th>CM Violations</th>
<th>IS</th>
<th>ES</th>
<th>CO</th>
<th>Number/Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>3.03</td>
<td>5.99</td>
<td>5.59</td>
<td>75/19%</td>
</tr>
<tr>
<td>1-2</td>
<td>3.15</td>
<td>5.93</td>
<td>5.50</td>
<td>135/35%</td>
</tr>
<tr>
<td>3-8</td>
<td>2.87</td>
<td>5.85</td>
<td>5.37</td>
<td>143/40%</td>
</tr>
<tr>
<td>9-19</td>
<td>2.65</td>
<td>5.71</td>
<td>5.32</td>
<td>28/6%</td>
</tr>
<tr>
<td>20-25</td>
<td>2.56</td>
<td>5.52</td>
<td>4.93</td>
<td>3/1%</td>
</tr>
</tbody>
</table>

Significance: $F = 4.92; p < .001$, $F = 4.918; p < .001$, $F = 4.174; p < .003$

CM Violations = Compliance Measure Violations (lower score = higher compliance)(higher score = lower compliance)

IS = Average CLASS IS (Instructional Support) Score

ES = Average CLASS ES (Emotional Support) Score

CO = Average CLASS CO (Classroom Organization) Score

#/% = Number of programs and Percent of programs at each level of compliance

When comparing these groupings in Table 3a the results from a One Way ANOVA were significant ($F = 4.92; p < .001$) for the CLASS/IS Scores. The average CLASS/IS Score when there were no CM Violations was 3.03. The average CLASS/IS Score when there were 1-2 CM Violations was 3.15. The average CLASS/IS Score when there were 3-8 CM Violations was 2.87. The average CLASS/IS Score when there were 9-19 CM Violations was 2.65. And finally, the average CLASS/IS Score when there were 20-25 violations was 2.56. The results were very similar with the CLASS/ES and CLASS/CO scores as well in which the results from a One Way ANOVA were statistically significant for the CLASS/ES ($F = 4.918; p < .001$) and for the CLASS/CO ($F = 4.174; p < .003$). These results clearly demonstrate that being in full or substantial compliance with the Compliance Measures correlates with more positive scores on the CLASS. Approximately 55% of the Head Start programs are at the full or substantial compliance level.

The practical implication of the above findings is that placing equal emphasis on full as well as substantial compliance with the Compliance Measures could be an acceptable public policy decision.

Section 4 – Head Start Key Indicators (HSKI)

The fourth and final section of this report is in some ways the most important since this is the focus of the study: developing statistically predictive Key Indicator (KI) Compliance Measures (CM) – the Head Start Key Indicators (HSKI).

These are the statistically predictive Key Indicators based upon the KI methodology, correlations with the CLASS/ES, CO, IS, and correlations with the CM Total Violation scores. Table 4 lists the results while Appendix 1 has the specific KI’s content specified. Appendix 2 depicts the KI Formula Matrix. Only those Compliance Measures (CM) that had significant results on three of the five correlations were selected to be Head Start Key Indicator Compliance Measures (HSKI).

The methodology used to generate the Compliance Measure Key Indicators sorted the top 20% of programs in compliance and compared this group to the bottom 27% of programs in compliance. The middle 53% of programs were not used in order to determine the Key Indicators. These cut off points...
were determined by the compliance distribution in which 20% of the programs were in 100% compliance while 27% of the programs had compliance scores of 95% or less.

Table 4 – Head Start Key Indicator (HSKI) Compliance Measures (CM) and CLASS and Total Violations

<table>
<thead>
<tr>
<th>HSKI/CM (2013)</th>
<th>Phi</th>
<th>CLASS/ES</th>
<th>CLASS/CO</th>
<th>CLASS/IS</th>
<th>Total Violations</th>
</tr>
</thead>
<tbody>
<tr>
<td>CDE4.1</td>
<td>.28***</td>
<td>.10*</td>
<td>ns</td>
<td>ns</td>
<td>.30***</td>
</tr>
<tr>
<td>CHS1.1</td>
<td>.39***</td>
<td>.15**</td>
<td>.16**</td>
<td>ns</td>
<td>.39***</td>
</tr>
<tr>
<td>CHS1.2</td>
<td>.33***</td>
<td>.18**</td>
<td>.15**</td>
<td>.10*</td>
<td>.36***</td>
</tr>
<tr>
<td>CHS2.1</td>
<td>.49***</td>
<td>.18**</td>
<td>.15**</td>
<td>ns</td>
<td>.54***</td>
</tr>
<tr>
<td>CHS3.10</td>
<td>.39***</td>
<td>.11*</td>
<td>.11*</td>
<td>ns</td>
<td>.24***</td>
</tr>
<tr>
<td>GOV2.1</td>
<td>.31***</td>
<td>.11*</td>
<td>ns</td>
<td>ns</td>
<td>.46***</td>
</tr>
<tr>
<td>SYS2.1</td>
<td>.47***</td>
<td>.15**</td>
<td>.16**</td>
<td>.14**</td>
<td>.55***</td>
</tr>
<tr>
<td>SYS3.4</td>
<td>.58***</td>
<td>.13*</td>
<td>.10*</td>
<td>ns</td>
<td>.36***</td>
</tr>
</tbody>
</table>

\( \Phi = \) the phi coefficient which statistically predicts compliance with the full set of CM's.

CLASS/ES = correlations between the specific CM and this specific scale of the CLASS.
CLASS/CO = correlations between the specific CM and this specific scale of the CLASS.
CLASS/IS = correlations between the specific CM and this specific scale of the CLASS.

Total Violations = correlations between the specific CM and the total number of CM violations for each program.

*  \( p < .05 \)
**  \( p < .01 \)
***  \( p < .001 \)
ns  = not significant

Separate Key Indicators were run for just Head Start only and Head Start/Early Head Start programs but the key indicators were only a subset of the above list, albeit a shorter list in each case. Based upon those phi coefficients, it was determined that using the above list for all Head Start only, Early Head Start, and Head Start/Early Head Start was a more efficient and effective way to monitor all the programs with one list of indicators rather than having separate key indicators for program types. The separate phi coefficients run for Head Start only and Head Start/Early Head Start programs did not show any significant differences because they were sub-samples of the overall sample drawn.

Section 4A – Suggested Use of the HSKI for Head Start Program Monitoring

Now that Key Indicators have been generated, the next question is how to use HSKI in the program monitoring of Head Start. A possible way in which the HSKI could be used would be the following (see Figure 1) in which a differential monitoring approach could be used:

All programs would be administered the HSKI. If there is full (100%) compliance with the Head Start Key Indicators (HSKI) then the next scheduled review of the program would be an Abbreviated Monitoring Visit (AMV). If there is not 100% compliance with the Head Start Key Indicators (HSKI) then the next scheduled review of the program would be a Full Monitoring Visit (FMV) in which all Compliance Measures are reviewed. Based upon the results of the FMV a determination could be made regarding a compliance or non-compliance decision (see Figure 1) and how often the program will be visited.
Figure 1 – Head Start Key Indicator (HSKI) Compliance Measures Differential Monitoring Model

Compliance Decisions:

Head Start Key Indicators (HSKI) – this becomes a screening tool to determine if a program receives an AMV OR FMV visit.

HSKI (100%) = For the next visit, an Abbreviated Monitoring Visit (AMV) is conducted. Every 3-4 yrs a full Monitoring is conducted.

HSKI (not 100%) = For the next visit, a Full Monitoring Visit (FMV) is conducted and all CMs are reviewed.

Compliance = 98%+ with all CMs which indicates substantial to full compliance and 100% with HSKI. For the next visit, an Abbreviated Monitoring Visit (AMV) is conducted.

Non-compliance = less than 98% with all CMs which indicates low compliance. For the next visit a Full Monitoring Visit (FMV) is conducted.

Moving to a differential monitoring system could provide a cost effective and efficient model for Head Start program monitoring. This revision to the Head Start program monitoring system would combine a risk assessment and key indicator approach (see Appendix 3) in determining what compliance measures to review, how often, and how comprehensive a review should be utilized. It would continue to focus on the most critical compliance measures that statistically predict overall compliance with the full complement of compliance measures.

See Appendix 7 – Figure 2 for how the above differential monitoring system could impact the present Head Start Tri-Annual Review Monitoring System. In this appendix, a cost neutral monitoring system is proposed based upon the above DMLMA/Key Indicator Model.
References


Footnotes

1) PIR Dashboard Key Indicators could not be generated because the PIR data demonstrated little statistical predictive ability to be useful for discriminating between high and low compliant programs or program quality with the exception of staff having CDA’s.

2) The correlation between Compliance Measures (CM) and the statistically predictive Key Indicators (HSKI) was .77 which exceeds the expected correlation threshold.

3) The correlations between the CLASS/ES, CO, IS and Key Indicators were the following: .27, .25, .17 respectively. The correlations between KI and ES, CO were higher than the correlations between CM and ES, CO as reported earlier in this report. The correlation between IS and CM was higher .20 than KI and IS (.17).

4) Because this study spans the 2012 Review Protocol and 2013 Monitoring Protocol, Compliance Indicators and Compliance Measures are used interchangeably with a preference given to using Compliance Measures (CM) in this report. There are 139 Compliance Indicators; 115 Compliance Measures, but for the purposes of this study 131 Compliance Measures were available in the 2012 Head Start data base drawn for this study.

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February 2013 (revised March, April 2013)
### Appendix 1 – Head Start Key Indicators (HSKI) Compliance Measures Content

<table>
<thead>
<tr>
<th>CM</th>
<th>Content</th>
<th>Regulations/Law</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHS1.1</td>
<td>The program engages parents in obtaining from a health care professional a determination of whether each child is up to date on a schedule of primary and preventive health care (including dental) and assists parents in bringing their children up to date when necessary and keeping their children up to date as required.</td>
<td>1304.20(a)(1)(ii), 1304.20(a)(1)(ii)(A), 1304.20(a)(1)(ii)(B)</td>
</tr>
<tr>
<td>CHS1.2</td>
<td>The program ensures that each child with a known, observable, or suspected health, oral health, or developmental problem receives follow-up and further testing, examination, and treatment from a licensed or certified health care professional.</td>
<td>1304.20(a)(1)(iii), 1304.20(a)(1)(iv), 1304.20(c)(3)(ii)</td>
</tr>
<tr>
<td>CHS2.1</td>
<td>The program, in collaboration with each child’s parent, performs or obtains the required linguistically and age-appropriate screenings to identify concerns regarding children within 45 calendar days of entry into the program, obtains guidance on how to use the screening results, and uses multiple sources of information to make appropriate referrals.</td>
<td>1304.20(a)(2), 1304.20(b)(1), 1304.20(b)(2), 1304.20(b)(3)</td>
</tr>
<tr>
<td>CHS3.10</td>
<td>Maintenance, repair, safety of facility and equipment</td>
<td>1304.53(a)(7)</td>
</tr>
<tr>
<td>GOV2.1*</td>
<td>Members of the governing body and the Policy Council receive appropriate training and technical assistance to ensure that members understand information they receive and can provide effective oversight of, make appropriate decisions for, and participate in programs of the Head Start agency.</td>
<td>642(d)(3)</td>
</tr>
<tr>
<td>SYS2.1</td>
<td>The program established and regularly implements a process of ongoing monitoring of its operations and services, including delegate agencies, in order to ensure compliance with Federal regulations, adherence to its own program procedures, and progress towards the goals developed through its Self-Assessment process.</td>
<td>1304.51(i)(2), 641A(g)(3)</td>
</tr>
<tr>
<td>SYS3.4</td>
<td>Prior to employing an individual, the program obtains a: Federal, State, or Tribal criminal record check covering all jurisdictions where the program provides Head Start services to children; Federal, State, or Tribal criminal record check as required by the law of the jurisdiction where the program provides Head Start services; Criminal record check as otherwise required by Federal law</td>
<td>648A(g)(3)(A), 648A(g)(3)(B), 648A(g)(3)(C)</td>
</tr>
</tbody>
</table>

Appendix 2: Key Indicator Formula Matrix for HSKI – Head Start Key Indicators

<table>
<thead>
<tr>
<th></th>
<th>Providers In Compliance</th>
<th>Programs Out Of Compliance</th>
<th>Row Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>High Group</td>
<td>A</td>
<td>B</td>
<td>Y</td>
</tr>
<tr>
<td>Low Group</td>
<td>C</td>
<td>D</td>
<td>Z</td>
</tr>
<tr>
<td>Column Total</td>
<td>W</td>
<td>X</td>
<td>Grand Total</td>
</tr>
</tbody>
</table>

Key Indicator Statistical Methodology (Calculating the Phi Coefficient):

\[
\phi = \frac{(A)(D)-(B)(C)}{\sqrt{(W)(X)(Y)(Z)}}
\]

- \(A = \) High Group + Programs in Compliance on Specific Compliance Measure.
- \(B = \) High Group + Programs out of Compliance on Specific Compliance Measure.
- \(C = \) Low Group + Programs in Compliance on Specific Compliance Measure.
- \(D = \) Low Group + Programs out of Compliance on Specific Compliance Measure.

- \(W = \) Total Number of Programs in Compliance on Specific Compliance Measure.
- \(X = \) Total Number of Programs out of Compliance on Specific Compliance Measure.
- \(Y = \) Total Number of Programs in High Group.
- \(Z = \) Total Number of Programs in Low Group.

<table>
<thead>
<tr>
<th>Phi Coefficient Range</th>
<th>Characteristic of Indicator</th>
<th>Decision</th>
</tr>
</thead>
<tbody>
<tr>
<td>(+1.00) – (+.26)</td>
<td>Good Predictor</td>
<td>Include on HSKI</td>
</tr>
<tr>
<td>(+.25) – (0)</td>
<td>Too Easy</td>
<td>Do not Include</td>
</tr>
<tr>
<td>(0) – (-.25)</td>
<td>Too Difficult</td>
<td>Do not Include</td>
</tr>
<tr>
<td>(-.26) – (-1.00)</td>
<td>Terrible Predictor</td>
<td>Do not Include</td>
</tr>
</tbody>
</table>
Appendix 3

DIFFERENTIAL MONITORING LOGIC MODEL AND ALGORITHM (Fiene, 2012) DMLMA© Applied to the Office of Head Start Program Monitoring Compliance System

CI + PQ => RA + KI => DM

Head Start Examples:

CI = Head Start Performance Standards (HSPS)
PQ = CLASS ES, IS, CO (CLASS)
RA = Compliance Measures (CM)
KI = Key Indicators (generated from this study = Head Start Key Indicators (HSKI))
DM = Not Applicable at this time (NA) but see Figure 1 for a proposed model

DMLMA© Thresholds:
High Correlations (.70+) = CI x KI.
Moderate Correlations (.50+) = CI x RA; RA x DM; RA x KI; KI x DM.
Lower Correlations (.30+) = PQ x CI; PQ x RA; PQ x KI.
### Appendix 4: Content Areas and Compliance Measures

<table>
<thead>
<tr>
<th>Content Areas and Compliance Measures</th>
<th>Percent (%) Compliance</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CDE - CHILD DEVELOPMENT AND EDUCATION</strong></td>
<td></td>
</tr>
<tr>
<td>1.1(2.2) The program implements a curriculum that is aligned with the Head Start Child Development and Early Learning Framework...</td>
<td>99%</td>
</tr>
<tr>
<td>1.2 The program implements a curriculum that is evidence-based...</td>
<td>99%</td>
</tr>
<tr>
<td>1.3(2.1) The curriculum is comprehensive...</td>
<td>99%</td>
</tr>
<tr>
<td>2.1 The program implements an infant/toddler curriculum...</td>
<td>99%</td>
</tr>
<tr>
<td>2.2 The program develops secure relationships in out of home care settings for infants and toddlers...</td>
<td>100%</td>
</tr>
<tr>
<td>2.3 The program implements an infant/toddler curriculum that encourages trust...</td>
<td>100%</td>
</tr>
<tr>
<td>2.4 The program encourages the development of self-awareness, autonomy...</td>
<td>100%</td>
</tr>
<tr>
<td>2.5 The program fosters independence...</td>
<td>100%</td>
</tr>
<tr>
<td>2.6 The program enhances each child’s strengths by encouraging self control...</td>
<td>99%</td>
</tr>
<tr>
<td>2.7 The program plans for routines and transitions...</td>
<td>99%</td>
</tr>
<tr>
<td>2.9 The program encourages respect for others feelings and rights...</td>
<td>99%</td>
</tr>
<tr>
<td>2.10 The program provides opportunities for children to engage in child-initiated...</td>
<td>100%</td>
</tr>
<tr>
<td>2.11 Nutrition services contribute to children’s development and socialization...</td>
<td>100%</td>
</tr>
<tr>
<td>3.1 The program uses information from screenings, ongoing observations...</td>
<td>99%</td>
</tr>
<tr>
<td>3.2 The programs’ nutrition program is designed and implemented to meet the nutritional needs...</td>
<td>98%</td>
</tr>
<tr>
<td>3.4(CHS4.5) Meal and snack periods are appropriately scheduled...</td>
<td>99%</td>
</tr>
<tr>
<td>3.5(3.2) Services provided to children with identified disabilities are designed to support...</td>
<td>100%</td>
</tr>
<tr>
<td>3.6(3.3) The program designates a staff member or consultant to coordinate services for children w/disabilities...</td>
<td>100%</td>
</tr>
<tr>
<td>3.7(3.4) The program has secured the services of a mental health professional...</td>
<td>97%</td>
</tr>
<tr>
<td>3.8(3.5) The program’s approach to CDE is developmentally and linguistically appropriate...</td>
<td>99%</td>
</tr>
<tr>
<td>4.1 The program establishes goals for improving school readiness...</td>
<td>98%</td>
</tr>
<tr>
<td>4.2 The program uses self assessment information on school readiness goals...</td>
<td>99%</td>
</tr>
<tr>
<td>4.3 The program demonstrates that children who are dual language learners...</td>
<td>100%</td>
</tr>
<tr>
<td>5.1(4.1) The program hires teachers who have the required qualifications, training, &amp; experience...</td>
<td>92%</td>
</tr>
<tr>
<td>5.2 The program ensures that family child care providers have the required qualifications...</td>
<td>100%</td>
</tr>
<tr>
<td>5.3 The program ensures that all full time Head Start employees who provide direct education...</td>
<td>96%</td>
</tr>
<tr>
<td>5.4 The program ensures that home visitors have the required qualifications, training...</td>
<td>99%</td>
</tr>
<tr>
<td>5.5 When the majority of children speak the same language...</td>
<td>99%</td>
</tr>
<tr>
<td><strong>CHS - CHILD HEALTH AND SAFETY</strong></td>
<td></td>
</tr>
<tr>
<td>1.1 The program engages parents in obtaining from a health care professional a determination of whether each child...</td>
<td>89%</td>
</tr>
<tr>
<td>1.2 The program ensures that each child with a known, observable, or suspected health, oral health...</td>
<td>92%</td>
</tr>
<tr>
<td>1.3 The program involves parents, consulting with them immediately when child health or developmental problems...</td>
<td>100%</td>
</tr>
<tr>
<td>1.4 The program informs parents and obtains authorization prior to all health procedures...</td>
<td>98%</td>
</tr>
<tr>
<td>1.5 The program has established procedures for tracking the provision of health services...</td>
<td>97%</td>
</tr>
<tr>
<td>1.6 The EHS program helps pregnant women, immediately after enrollment in the program, access through referrals...</td>
<td>100%</td>
</tr>
<tr>
<td>1.7 Program health staff conduct a home visit or ensure that a health staff member visits each newborn within 2 weeks of birth...</td>
<td>97%</td>
</tr>
<tr>
<td>2.1 The program, in collaboration with each child’s parent, performs or obtains the required screenings...</td>
<td>84%</td>
</tr>
<tr>
<td>2.2 A coordinated screening, assessment, and referral process for all children...</td>
<td>98%</td>
</tr>
<tr>
<td>2.3 The program, in partnership with the LEA or Part C Agency, works to inform and engage parents in all plans for screenings...</td>
<td>99%</td>
</tr>
<tr>
<td>3.1 Facilities used for center based program options comply with state and local licensing...</td>
<td>100%</td>
</tr>
<tr>
<td>3.2 The program ensures that sufficient equipment, toys, materials, and furniture are provided...</td>
<td>97%</td>
</tr>
<tr>
<td>3.3 Precautions are taken to ensure the safety of children...</td>
<td>99%</td>
</tr>
<tr>
<td>3.4 The program ensures that medication is properly stored and is not accessible to children...</td>
<td>98%</td>
</tr>
<tr>
<td>3.5 The program ensures that no hazards are present around children...</td>
<td>89%</td>
</tr>
<tr>
<td>3.6 The program ensures that sleeping arrangements for infants do not use soft bedding materials...</td>
<td>99%</td>
</tr>
<tr>
<td>3.7 All infant and toddler toys are made of non-toxic materials and sanitized regularly...</td>
<td>99%</td>
</tr>
<tr>
<td>3.8 The program has adequate usable indoor and outdoor space...</td>
<td>99%</td>
</tr>
<tr>
<td>3.9 Outdoor play areas are arranged to prevent children from getting into unsafe or unsupervised areas...</td>
<td>100%</td>
</tr>
<tr>
<td>3.10 The program provides for maintenance, repair, safety, and security of all Head Start facilities and equipment...</td>
<td>85%</td>
</tr>
<tr>
<td>3.11 The program’s facilities provide adequately for children with disabilities...</td>
<td>100%</td>
</tr>
<tr>
<td>4.1 Staff, volunteers, and children wash their hands with soap and running water...</td>
<td>98%</td>
</tr>
<tr>
<td>4.2 Spilled bodily fluids are cleaned up and disinfected immediately...</td>
<td>100%</td>
</tr>
<tr>
<td>4.3 The program adopts sanitation and hygiene practices for diapering...</td>
<td>99%</td>
</tr>
<tr>
<td>Indicator</td>
<td>Description</td>
</tr>
<tr>
<td>----------</td>
<td>-------------</td>
</tr>
<tr>
<td>4.4(4.7)</td>
<td>The program ensures that facilities are available for proper refrigerated storage and handling of breast milk and formula.</td>
</tr>
<tr>
<td>4.5(4.8)</td>
<td>Effective oral hygiene is promoted among children in conjunction with meals.</td>
</tr>
<tr>
<td>5.1</td>
<td>The program ensures appropriate class and group sizes based on the predominant age of the children.</td>
</tr>
<tr>
<td>5.2</td>
<td>The program ensures that no more than eight children are placed in an infant and toddler space.</td>
</tr>
<tr>
<td>6.1</td>
<td>The program’s vehicles are properly equipped.</td>
</tr>
<tr>
<td>6.2</td>
<td>At least one bus monitor is aboard the vehicle at all times.</td>
</tr>
<tr>
<td>6.3</td>
<td>Children are released only to a parent.</td>
</tr>
<tr>
<td>6.4</td>
<td>Each bus monitor, before duty, has been trained on child boarding and exiting procedures.</td>
</tr>
<tr>
<td>6.5</td>
<td>The program ensures that persons employed to drive vehicles receive the required behind the wheel training.</td>
</tr>
<tr>
<td>6.6</td>
<td>Specific types of transportation assistance offered are made clear to all prospective families.</td>
</tr>
<tr>
<td>ERSEA – ELIGIBILITY, RECRUITMENT, SELECTION, ENROLLMENT, AND ATTENDANCE</td>
<td></td>
</tr>
<tr>
<td>1.1</td>
<td>The program developed and implemented a process that is designed to actively recruit families.</td>
</tr>
<tr>
<td>1.2</td>
<td>The program has a systematic process for establishing selection criteria.</td>
</tr>
<tr>
<td>1.3</td>
<td>The program has established and implemented outreach and enrollment policies and procedures.</td>
</tr>
<tr>
<td>2.1</td>
<td>Program staff verified each child’s eligibility.</td>
</tr>
<tr>
<td>2.2</td>
<td>The program enrolls children who are categorically eligible.</td>
</tr>
<tr>
<td>2.3</td>
<td>The American Indian or Alaskan Native programs ensure that the children who meet the following requirements.</td>
</tr>
<tr>
<td>3.1</td>
<td>Actual program enrollment is composed of at least 10 percent children with disabilities.</td>
</tr>
<tr>
<td>3.2</td>
<td>The program enrolled 100% of its funded enrollment.</td>
</tr>
<tr>
<td>3.3</td>
<td>The program has documentation to support monthly enrollment data.</td>
</tr>
<tr>
<td>4.1</td>
<td>When monthly average daily attendance in center based programs falls below 85%, the causes of absenteeism.</td>
</tr>
<tr>
<td>4.2</td>
<td>The program ensures that no child’s enrollment or participation in the Head Start program is contingent on payment of a fee.</td>
</tr>
<tr>
<td>FCE – FAMILY AND COMMUNITY ENGAGEMENT</td>
<td></td>
</tr>
<tr>
<td>1.1(1.2)</td>
<td>Program staff are familiar with the backgrounds of families and children.</td>
</tr>
<tr>
<td>1.2(1.3)</td>
<td>A strength based family driven collaborative partnership building process is in place.</td>
</tr>
<tr>
<td>1.3(1.4)</td>
<td>The program provides resources and services for families’ needs, goals, and interests.</td>
</tr>
<tr>
<td>2.1</td>
<td>The program provides opportunities for parents to enhance their parenting skills.</td>
</tr>
<tr>
<td>2.2</td>
<td>Parents and staff share their respective concerns and observations about their individual children.</td>
</tr>
<tr>
<td>2.3</td>
<td>On site mental health consultation assists the program in providing education to parents.</td>
</tr>
<tr>
<td>3.1</td>
<td>Program staff plan, schedule, and facilitate no fewer than two staff parent conferences.</td>
</tr>
<tr>
<td>3.2(1.1)</td>
<td>The program is open to parents during all program hours.</td>
</tr>
<tr>
<td>3.3(3.2)</td>
<td>In home based settings, programs encourage parents to be integrally involved in their children’s development.</td>
</tr>
<tr>
<td>3.4(3.3)</td>
<td>Programs provide opportunities for children and families to participate in literacy services.</td>
</tr>
<tr>
<td>3.5(3.4)</td>
<td>The program builds parents’ confidence to advocate for their children by informing parents of their rights.</td>
</tr>
<tr>
<td>4.1</td>
<td>The program has procedures to support successful transitions for enrolled children.</td>
</tr>
<tr>
<td>4.2</td>
<td>The program initiates transition planning for each EHS enrolled child at least 6 months prior to the child’s 3rd birthday.</td>
</tr>
<tr>
<td>5.1</td>
<td>The program has established and maintains a health services advisory committee.</td>
</tr>
<tr>
<td>5.2</td>
<td>The program has taken steps to establish ongoing collaborative relationships with community organizations.</td>
</tr>
<tr>
<td>5.3</td>
<td>The program coordinates with and has current interagency agreements in place with LEA’s.</td>
</tr>
<tr>
<td>FIS – FISCAL INTEGRITY</td>
<td></td>
</tr>
<tr>
<td>1.1</td>
<td>The program’s financial management systems provide for effective control.</td>
</tr>
<tr>
<td>1.2</td>
<td>The program sought and received prior approval in writing for budget changes.</td>
</tr>
<tr>
<td>1.3</td>
<td>The program minimized the time elapsing between the advancement of funds from the Payment Management System.</td>
</tr>
<tr>
<td>1.4</td>
<td>The program used Head Start funds to pay the cost of expenses.</td>
</tr>
<tr>
<td>1.5</td>
<td>The program has obtained and maintained required insurance coverage for risks and liabilities.</td>
</tr>
<tr>
<td>2.1</td>
<td>Financial reports and accounting records are current, accurate, complete.</td>
</tr>
<tr>
<td>2.2</td>
<td>Monthly financial statements, are provided to program governing bodies and policy groups.</td>
</tr>
<tr>
<td>3.1(3.1)</td>
<td>The program has procurement procedures that provide all requirements specified in the applicable statutes.</td>
</tr>
<tr>
<td>3.2(3.1)</td>
<td>Contracts and delegate agency agreements are current, available, signed, and dated.</td>
</tr>
<tr>
<td>4.1</td>
<td>Original time records are prepared and properly signed by the individual employee &amp; approved.</td>
</tr>
<tr>
<td>4.2</td>
<td>Head Start or EHS grant funds are not used as any part of the monetary compensation.</td>
</tr>
<tr>
<td>4.3</td>
<td>Total compensation for personal services charged to the grant are allowable and reasonable.</td>
</tr>
<tr>
<td>5.1</td>
<td>The grantee has implemented procedures to determine allowability, allocability, and reasonableness of costs.</td>
</tr>
<tr>
<td>5.2</td>
<td>Indirect cost charges are supported by a negotiated and approved indirect cost rate.</td>
</tr>
<tr>
<td>5.3</td>
<td>If the grantee is required to allocate costs between funding sources, the program utilizes a method for allocating costs.</td>
</tr>
<tr>
<td>5.4</td>
<td>The financial records of the grantee are sufficient to allow verification that non-Federal participation is necessary.</td>
</tr>
<tr>
<td>5.5(5.5)</td>
<td>The grantee can demonstrate that all contributions of non-Federal share are necessary and reasonable.</td>
</tr>
<tr>
<td>5.6(5.4)</td>
<td>During each funding period reviewed the grantee charged to the award only costs resulting from obligations.</td>
</tr>
<tr>
<td>6.1(6.1.6.2)</td>
<td>For grantees that own facilities purchased or constructed using Head Start grant funds, documentation is available.</td>
</tr>
<tr>
<td>6.2(6.1.6.2)</td>
<td>The grantee meets property management standards for equipment purchased using HS funds.</td>
</tr>
<tr>
<td>6.3(6.1.6.2)</td>
<td>Grantees that entered into a mortgage or other loan agreement using collateral property comply with Federal regulations.</td>
</tr>
<tr>
<td>6.4(6.1.6.2)</td>
<td>The amount which the grantee may claim a cost or non-Federal share contribution.</td>
</tr>
</tbody>
</table>

**GOV – PROGRAM GOVERNANCE**

96%
1.1 The program has a governing body. ................................. 98%
1.2 The program has established a policy council. .............. 98%
2.1 Policy council and policy committee members are supported by the program. .............. 99%
2.2 The program has policies and procedures in place to ensure that member of the governing body & PAC are free. ..... 97%
3.1(2.1) Members of the governing body and the PAC receive appropriate training and TA. .............. 94%
3.2(2.2) The governing body performs required activities and makes decisions pertaining to program administration. .... 95%
3.3 The governing body approves financial management, accounting, and reporting policies. .............. 99%
3.4 The governing body reviews and approves all of the program’s major policies. .............. 95%
3.5(2.4) The PAC approves and submits decisions about identified program activities to the governing body. .......... 98%
4.1(3.1) Governing body and PAC members regularly receive and use information about program planning. .............. 88%

**SYS – MANAGEMENT SYSTEMS**

91%

1.1 The program routinely engages in a process of systematic planning that utilizes the results of the community assessment. .............. 97%
1.2(5.1) At least annually, the program conducts a self-assessment of program effectiveness. .............. 97%
2.1(5.2) The program established and regularly implements a process of ongoing monitoring of its operations and services. .............. 86%
2.2 The program established and maintains a record keeping system regarding children, families, and staff. .............. 92%
2.3 The program publishes and makes available to the public an annual report. .............. 88%
3.1 The program has established an organizational structure that provides for adequate supervision. .............. 97%
3.2 The program develops and implements written standards of conduct. .............. 97%
3.3 The program ensures that each staff member completes an initial health examination. .............. 90%
3.4 Prior to employing an individual, the program obtains: criminal record check. .............. 66%
4.1 The program has mechanisms for regular communication among all program staff. .............. 98%
Appendix 5 – Histograms of Total Compliance Measure Violations, CLASS (IS, ES, CO) Scores and Head Start Key Indicator (HSKI) Scores

Total Compliance Measure Violations

Mean = 3.33
Std. Dev. = 3.769
N = 422
CLASS ES Scores

Mean = 5.8935
Std. Dev. = .3578
N = 384
CLASS CO Scores

Mean = 5.4506
Std. Dev. = .4905
N = 384
CLASS IS Scores

Mean = 2.9533  
Std. Dev. = .7030  
N = 384
Head Start Key Indicators (HSKI) Scores

Mean = 1.00
Std. Dev. = 1.365
N = 422
## Appendix 6 -

### CONTENT AREA (CA) CORRELATIONS

<table>
<thead>
<tr>
<th></th>
<th>CHS</th>
<th>ERSEA</th>
<th>FCE</th>
<th>FIS</th>
<th>GOV</th>
<th>SYS</th>
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<tbody>
<tr>
<td>CDE</td>
<td>.33**</td>
<td>.26**</td>
<td>.06</td>
<td>.14**</td>
<td>.13*</td>
<td>.33**</td>
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<tr>
<td>CHS</td>
<td></td>
<td>.29**</td>
<td>.18**</td>
<td>.09</td>
<td>.25**</td>
<td>.51**</td>
</tr>
<tr>
<td>ERSEA</td>
<td></td>
<td></td>
<td>.15**</td>
<td>.10*</td>
<td>.27**</td>
<td>.38**</td>
</tr>
<tr>
<td>FCE</td>
<td></td>
<td></td>
<td></td>
<td>.01</td>
<td>.17**</td>
<td>.23**</td>
</tr>
<tr>
<td>FIS</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.13*</td>
<td>.23**</td>
</tr>
<tr>
<td>GOV</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.38**</td>
</tr>
</tbody>
</table>

* P < .05

** P < .01

### CONTENT AREAS (CA):
- FCE = FAMILY and COMMUNITY ENGAGEMENT
- ERSEA = ELIGIBILITY, RECRUITMENT, SELECTION, ENROLLMENT, and ATTENDANCE
- CDE = CHILD DEVELOPMENT AND EDUCATION
- GOV = PROGRAM GOVERNANCE
- FIS = FISCAL INTEGRITY
- CHS = CHILD HEALTH AND SAFETY
- SYS = MANAGEMENT SYSTEMS

## Appendix 6A – Total Compliance with Compliance Measures, HSKI, and Content Area Correlations

<table>
<thead>
<tr>
<th></th>
<th>TOT</th>
<th>HSKI</th>
</tr>
</thead>
<tbody>
<tr>
<td>CDE</td>
<td>.51**</td>
<td>.42**</td>
</tr>
<tr>
<td>CHS</td>
<td>.70**</td>
<td>.81**</td>
</tr>
<tr>
<td>ERSEA</td>
<td>.49**</td>
<td>.33**</td>
</tr>
<tr>
<td>FCE</td>
<td>.30**</td>
<td>.22**</td>
</tr>
<tr>
<td>FIS</td>
<td>.50**</td>
<td>.14**</td>
</tr>
<tr>
<td>GOV</td>
<td>.57**</td>
<td>.37**</td>
</tr>
<tr>
<td>SYS</td>
<td>.78**</td>
<td>.72**</td>
</tr>
</tbody>
</table>

TOT = Total Compliance with all Compliance Measures.
HSKI = Total Compliance with the Head Start Key Indicators.
Appendix 7 – Figure 2 – DMLMA Potential Impact on Tri-Annual Head Start Program Reviews

Present Head Start Monitoring System:

All programs receive the same Tri-Annual Reviews regardless of Compliance History:

1. Tri-Annual Review – all 131 CM’s
2. Tri-Annual Review – all 131 CM’s
3. Tri-Annual Review – all 131 CM’s

Proposed DMLMA System with Key Indicators (KI):

1. 100% Compliance with the Head Start Key Indicators (HSKI):
   1. HSKI 8 KI - CM’s
   2. HSKI 8 KI CM’s
   3. HSKI 8 KI CM’s
   4. HSKI 8 KI CM’s
   5. FULL REVIEW OF ALL 131 CM’S APPLIED
   6. HSKI 8 KI CM’s
   7. HSKI 8 KI CM’s

2. If less than 100% with the Head Start Key Indicators (HSKI):
   1. Full Review – all 131 CM’s applied
   2. Full Review – all 131 CM’s applied
   3. Full Review – all 131 CM’s applied
   4. Full Review – all 131 CM’s applied
The above proposed change is cost neutral by re-allocating monitoring staff from doing only Tri-Annual Reviews on every program to doing abbreviated monitoring via the HSKI on the highly compliant programs with periodic comprehensive full monitoring less frequently (this would change if a program did not continue to be 100% in-compliance with the HSKI), and only doing more comprehensive full monitoring on those programs with low compliance with the Compliance Measures and/or less than 100% compliance with the HSKI. Once a program was in the high compliance group they would be eligible for the HSKI abbreviated monitoring.

However, the real advantage in this proposed change is the increased frequency of targeted or differential monitoring of all programs.

**DMLMA Algorithm with Key Indicators applied to Head Start Tri-Annual Reviews:**

Six (6) Years example:

**Present Head Start Monitoring System:**

(Tri-Annual Visits)(Compliance Measures)(Percent of Programs(%)) = Total Effort
(3)(131)(100) = 39300
Total Effort = **39300**

**Revised Head Start Monitoring DMLMA with Key Indicators System:**

100% Compliance with HSKI:
(Number of Monitoring Visits)(Compliance Measures)(Percent of Programs*(%)) = Total Effort
Abbreviated Monitoring Visits using Key Indicators: (6)(8)(43*) = 2064
Full, Comprehensive Monitoring Visit using all Compliance Measures: (1)(131)(43*) = 5633

Less than 100% Compliance with HSKI:
(Number of Monitoring Visits)(Compliance Measures)(Percent of Programs**(%) = Total Effort
Full, Comprehensive Monitoring Visits using all Compliance Measures: (4)(131)(57**) = 29868

100% Compliance with HSKI + Less than 100% Compliance with HSKI = Total Effort:
Total Effort = 2064 + 5633 + 29868 = **37565**

*This was the actual percent of Head Start Programs that met the criteria of 100% compliance with HSKI in this study.
**This was the actual percent of Head Start Programs that did not meet the criteria of 100% compliance with HSKI in this study.

It would be expected that the total population of Head Start programs would have a similar percent as was found in this representative sample (43% = 100% compliance with HSKI and 57% = less than 100% compliance with HSKI). This representative sample for this study constituted approximately 25% of all Head Start programs nationally.
This short paper will present the Key Indicators as they appear in Stepping Stones (3rd edition). It provides the statistically predictive standards (Key Indicators) that could determine overall compliance with Stepping Stones (AAP, APHA, NRC, 2013) and Caring for Our Children (AAP, APHA, NRC, 2011) based upon the statistical methodology (Fiene & Nixon, 1985). But before delineating the Key Indicators a few definitions need to be provided to put these key indicators in perspective.

Definitions:

**Risk Assessment (RA)** - a differential monitoring approach that employs using only those rules, standards, or regulations that place children at greatest risk of mortality or morbidity if violations/citations occur with the specific rule, standard, or regulation. Stepping Stones (3rd edition) is an example of a risk assessment approach.

**Key Indicators (KI)** - a differential monitoring approach that employs using only those rules, standards, or regulations that statistically predict overall compliance with all the rules, standards, or regulations. In other words, if a program is 100% in compliance with the Key Indicators the program will also be in substantial to full compliance with all rules, standards, or regulations. The reverse is also true in that if a program is not 100% in compliance with the Key Indicators the program will also have other areas of non-compliance with all the rules, standards, or regulations. The key indicators put forth in this paper are an example of the approach.

**Differential Monitoring (DM)** - this is a relatively new approach to determining the number of visits made to programs and what rules, standards, or regulations are reviewed during these visits. There are two measurement tools that drive differential monitoring, one is Weighted Risk Assessment tools and the other is Key Indicator checklists. Weighted Risk Assessments determine how often a program will be visited while Key Indicator checklists determine what rules, standards, or regulations will be reviewed in the program. Differential monitoring is a very powerful approach when Risk Assessment is combined with Key Indicators because a program is reviewed by the most critical rules, standards, or regulations and the most predictive rules, standards, or regulations. See Fiene’s Logic Model & Algorithm for Differential Monitoring *(DMLMA©)* (Fiene, 2013).

**Early Childhood Program Quality Indicator Model (ECPQIM)** (Fiene, 2013; Fiene & Kroh, 2000; Griffin & Fiene, 1995; Fiene & Nixon, 1985) – this definition is provided to place the results of this paper into the larger program monitoring systems perspective. ECPQIM are models that employ a key indicator or dashboard approach to program monitoring. Major program monitoring systems in early care and education are integrated conceptually so that the overall early care and education system can be assessed and validated. With these models, it is possible to compare results obtained from licensing systems, quality rating and improvement systems (QRIS), risk assessment systems, key indicator systems, technical assistance, and child development/early learning outcome systems. The various approaches to validation (Zellman & Fiene, 2012) are interposed within this model and the specific
expected correlational thresholds that should be observed amongst the key elements of the model are suggested. Key Elements of the model are the following: CI = Comprehensive Instrument - state or federal standards, usually rules or regulations that measure health and safety - Caring for Our Children or Head Start Performance Standards will be applicable here. Quality Rating and Improvement Systems (QRIS) standards at the state level; ERS (ECERS, ITERS, FDCRS), CLASS, or CDPES (Fiene & Nixon, 1985). RA = Risk assessment tools/systems in which only the most critical rules/standards are measured. Stepping Stones is an example of this approach. KI = Key indicators in which only predictor rules/standards are measured. The Thirteen Indicators of Quality Child Care (Fiene, 2003) is an example of this approach. DM = Differential monitoring decision making in which it is determined if a program is in compliance or not and the number of visits/the number of rules/standards are ascertained from a scoring protocol. Technical assistance/training and/or professional development system which provides targeted assistance to the program based upon the Differential Monitoring results. And finally, child outcomes which assesses how well the children are developing which is the ultimate goal of the system.

The Key Indicators from Stepping Stones (3rd Edition)

1.1.1.2 - Ratios for Large Family Child Care Homes and Centers
1.3.1.1 - General Qualifications of Directors
1.3.2.2 - Qualifications of Lead Teachers and Teachers
1.4.3.1 - First Aid and CPR Training for Staff
1.4.5.2 - Child Abuse and Neglect Education
2.2.0.1 - Methods of Supervision of Children
3.2.1.4 - Diaper Changing Procedure
3.2.2.2 - Handwashing Procedure
3.4.3.1 - Emergency Procedures
3.4.4.1 - Recognizing and Reporting Suspected Child Abuse, Neglect, and Exploitation
3.6.3.1 - Medication Administration
5.2.7.6 - Storage and Disposal of Infectious and Toxic Wastes
6.2.3.1 - Prohibited Surfaces for Placing Climbing Equipment
7.2.0.2 - Unimmunized Children
9.2.4.5 - Emergency and Evacuation Drills/Exercises Policy
Just as there has been three editions of *Caring for Our Children* and *Stepping Stones*, this paper and the resulting Key Indicators represents the third edition of Key Indicators for early care and education. The first two editions are represented in the publications by Fiene & Nixon (1985) and Fiene (2003) respectively (see the reference list below).

**References**


Notes:

1  Please see Stepping Stones (3rd edition) and Caring for Our Children (3rd edition) for the details of each Key Indicator.

2  For the reader who is interested in learning more about the DMLMA/ECPQIM model, please refer to these publications which are available through the following website:

   http://RIKInstitute.wikispaces.com

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Kansas Child Care Licensing Key Indicator Study

Richard Fiene, Ph.D.

INTRODUCTION

The purpose of this report is to provide the Kansas Child Care Office with basic analyses for the development of their key indicator system for both centers and homes. Licensing data from 2012 taken from both centers (CCC) (n = 482) and homes (FCC) (n = 500) were used in this Licensing Key Indicator study. The centers were further broken down into 52 (11%) Head Start programs and 430 (89%) child care centers. The homes were further broken down into 115 (23%) group homes and 385 (77%) family homes.

Definitions:

Key Indicators (KI) = a differential monitoring approach that employs using only those rules that statistically predict overall compliance with all the rules. In other words, if a program is 100% in compliance with the Key Indicators the program will also be in substantial to full compliance with all rules. The reverse is also true in that if a program is not 100% in compliance with the Key Indicators, the program will also have other areas of non-compliance with all the rules. In this study, 8 Key Indicator rules were identified for CCC and 6 Key Indicator rules for FCC. The Key Indicators can be found in the Findings Section of this report.

Rule Violations or Citations = this occurs when a program does not meet a specific rule and is cited as being out of compliance with that rule.

METHODOLOGY

A Differential Monitoring Logic Model and Algorithm (DMLMA©) (Fiene, 2012) was employed, in particular, the key indicator methodology to generate the Key Indicators for this project. The DMLMA© is the 4th generation of an Early Childhood Program Quality Indicator Model (ECPQIM) (Fiene & Nixon, 1985; Griffin & Fiene, 1995; Fiene & Kroh, 2000).

The DMLMA© (see Figure 1) provides the conceptual model for assessing the overall effectiveness of a differential monitoring system. The two main tools in a Differential Monitoring (DM) system are Risk Assessment (RA) and Key Indicator (KI) measurement tools. Both the Risk Assessment and Key Indicator tools are derived from a comprehensive licensing tool (CI) that measures compliance with all rules. For the purposes of this study the Licensing Data taken from Kansas Monitoring Reviews represents the comprehensive licensing tool (CI). Kansas presently does not use a Risk Assessment or a Program Quality tool (see Table 1).

Table 1  

<table>
<thead>
<tr>
<th>DMLMA© Terminology</th>
<th>Kansas Examples and Data Sources</th>
</tr>
</thead>
<tbody>
<tr>
<td>Comprehensive Tool (CI)</td>
<td>Licensing Data from Kansas Monitoring Visits</td>
</tr>
<tr>
<td>Program Quality Tool (PQ)</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Risk Assessment Tool (RA)</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Key Indicators (KI)</td>
<td>Generated from this Study</td>
</tr>
<tr>
<td>Differential Monitoring (DM)</td>
<td>Not Applicable</td>
</tr>
</tbody>
</table>
FINDINGS

There are some overall demographic findings presented first that help to put the results in context. As mentioned in the introduction there were 482 centers and 500 homes that were part of these analyses. Eleven percent (11%) of the centers were 100% in compliance with all rules while 25% of the homes were 100% in compliance with all rules. These figures are fairly typical of state averages. The average number of violations for centers was 7.44 violations with all applicable rules and 3.52 violations for homes.

Location of the various facilities seemed to have an impact on average violations recorded. For example, with centers, urban facilities had a significantly higher level of violations (8.42 average violations; n = 279) than facilities located in rural communities (6.09 average violations; n = 203). This result was statistically significant (F = 14.19; p < .0001). However, the differences for homes was not statistically significant, with urban homes (n = 222) having 3.64 average violations versus 3.42 average violations for rural homes (n = 278).

There were statistically significant differences depending on the Region the facilities were located in. For centers, the highest levels of violations with child care rules were in Regions 1 (9.30 average violations; n = 109) and 2 (8.32 average violations; n = 191) while Regions 3 (5.31 average violations; n = 121) and 4 (5.57 average violations; n = 61) had lower averages (see Table 2). This result is statistically significant (F = 9.82; p < .0001).

Table 2: Violation Data in Centers and Homes by Regional Location

<table>
<thead>
<tr>
<th>Region</th>
<th>Centers</th>
<th>Homes</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Violations*</td>
<td>Number</td>
</tr>
<tr>
<td>1</td>
<td>9.30</td>
<td>109</td>
</tr>
<tr>
<td>2</td>
<td>8.32</td>
<td>191</td>
</tr>
<tr>
<td>3</td>
<td>5.31</td>
<td>121</td>
</tr>
<tr>
<td>4</td>
<td>5.57</td>
<td>61</td>
</tr>
</tbody>
</table>

* = Average Violations (Mean)

For homes, a slightly different distribution occurs in which Region 2 (4.63 average violations; n = 120) was significantly higher than the other three regions. This result is statistically significant (F = 7.24; p < .0001).

Also the type of licensing inspection saw some variation in the average number of violations although none of the following results were statistically significant (see Table 3).

Table 3: Violation Data in Centers and Homes by Type of Licensing Inspection

<table>
<thead>
<tr>
<th>License Type</th>
<th>Centers</th>
<th>Homes</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Violations*</td>
<td>Number</td>
</tr>
<tr>
<td>Initial</td>
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</tr>
<tr>
<td>Renewal</td>
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<tr>
<td>Amendment</td>
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<td>55</td>
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<tr>
<td>Correction</td>
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</tr>
<tr>
<td>Temporary</td>
<td>11.22</td>
<td>9</td>
</tr>
</tbody>
</table>

* = Average Violations (Mean)

The last demographic analysis was to compare the average number of violations between group homes and family homes; and between child care centers and Head Start programs. There was not a significant difference between group homes (3.75 average violations; n = 115) and family homes (3.45 average violations; n = 385); but a statistically significant difference occurred (F = 10.44; p < .001) between child care centers (7.78 average violations; n =430) and Head Start programs (4.60 average violations; n = 52) with the Head Start programs having significantly fewer rule violations.
Key Indicator Findings

The following findings will provide the Key Indicators for centers (child care centers and Head Start) and homes (family and group homes). It will provide a listing of the rules and the respective phi coefficients. These Key Indicators were obtained from rank ordering the total compliance scores into quartiles with the 25% highest violation scores for facilities as the low group and the lowest 25% violation scores for facilities as the high group. Each rule was compared to this result by their respective compliance level, either being in or out of compliance with the rule. Once these data were prepared the formula in Table 4 was used to determine if the rule met the predictive level. Separate analyses for generating Key Indicators were not run for Head Start or Group Homes because of the insufficient number of programs in each category.

Centers (Child Care Centers and Head Start)(See Table 5 for a Summary)

All results are reported with the specific rule, p < .0001, and phi coefficient from the formula in Table 4.

K.A.R.28-4-126b1. Each person regularly caring for children shall have a health assessment conducted by a licensed physician or by a nurse trained to perform health assessments. The health assessment shall be conducted no earlier than one year before the date of employment or initial application for a license or certificate of registration, or not later than 30 days after the date of employment or initial application.  (phi = .59)

K.A.R.28-4-126c1. Each person living, working or regularly volunteering in the facility shall have a record of a negative tuberculin test or x-ray obtained not more than two years before the employment or initial application, for a license or certificate of registration or not later than 30 days after the date of employment or initial application. (phi = .62)

K.A.R.28-4-423a18. The premises shall be maintained in good condition and shall be clean at all times, free from accumulated dirt and trash, and any evidence of vermin or rodent infestation. Each outdoor trash and garbage container shall be covered, and the contents shall be removed at least weekly. (phi = .59)

K.A.R.28-4-423a23. Medicines, household poisons, and other dangerous substances and instruments shall be in locked storage. (phi = .60)

K.A.R.28-4-428aa3. Each licensee shall ensure that orientation is completed by each staff member who will be counted in the staff-child ratio and by each volunteer who will be counted in the staff-child ratio. Each staff member and volunteer shall complete the orientation within seven calendar days after the date of employment or volunteering and before the staff member or volunteer is given sole responsibility for the care and supervision of children. (phi = .51)

K.A.R.28-4-428ac1. Each staff member counted in the staff-child ratio, each volunteer counted in the staff-child ratio, and each program director shall obtain certification in pediatric first aid and in pediatric CPR as specified in this subsection either before the date of employment or volunteering or not later than 30 calendar days after the date of employment or volunteering. (phi = .53)

K.A.R.28-4-430c3. Each staff member shall be trained to observe symptoms of illness, neglect, and child abuse, and shall observe each child's physical condition daily. (phi = .54)

K.A.R.28-4-437d. The outdoor play space shall be well drained and free of hazards. (phi = .59)

Footnote:
Child Care Centers (CCC) – The correlation between the Key Indicators and all the rules was .77.
Family Child Care (FCC) – The correlation between the Key Indicators and all the rules was .80.
Both these results exceed the DMLMA© Thresholds for KI x CI (.70).
Homes (Family and Group Homes)(See Table 5 for a Summary)

All results are reported with the specific rule, p < .0001, and phi coefficient from the formula in Table 4.

K.A.R.28-4-115g1. All household cleaning supplies and all bodily care products bearing warning labels to keep out of reach of children or containing alcohol shall be in locked storage or stored out of reach of children under six years of age. Soap used for hand washing may be kept unlocked and placed on the back of the counter by a bathroom or kitchen sink.  

(\text{phi} = .47)

K.A.R.28-4-115aa1A. Supervision plan. Each applicant, each applicant with a temporary permit, and each licensee shall develop a supervision plan for children in care that includes all age ranges of children for whom care will be provided. A copy of the plan shall be available for review by the parents or legal guardians of children in care and by the department. The plan shall include the following: A description of the rooms, levels, or areas of the facility including indoor and outdoor areas in which the child will participate in activities, have snacks or meals, nap, or sleep.  

(\text{phi} = .79)

K.A.R.28-4-115aa1B. Supervision plan. Each applicant, each applicant with a temporary permit, and each licensee shall develop a supervision plan for children in care that includes all age ranges of children for whom care will be provided. A copy of the plan shall be available for review by the parents or legal guardians of children in care and by the department. The plan shall include the following: the manner in which supervision will be provided.  

(\text{phi} = .44)

K.A.R.28-4-117a1. A completed medical record on a form supplied by the department shall be on file for each child under 11 years of age enrolled for care and for each child under 16 living in the child care facility.  

(\text{phi} = .44)

K.A.R.28-4-117c. Immunizations for each child, including each child of the provider under 16 years of age shall be current as medically appropriate and shall be maintained current for protection from the diseases specified in K.A.R. 28-1-20(d). A record of each child's immunizations shall be maintained on the child's medical record.  

(\text{phi} = .68)

K.A.R.28-4-127b1A. Emergency medical treatment: Each facility shall have on file at the facility for each child: written permission of the parent, guardian, or legal custodian for emergency medical treatment on a form that meets the requirements of the hospital or clinic where emergency medical care will be given.  

(\text{phi} = .53)

References


Table 4: Kansas Key Indicator (KSKI) Formula Matrix

<table>
<thead>
<tr>
<th></th>
<th>Providers In Compliance</th>
<th>Programs Out Of Compliance</th>
<th>Row Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>High Group</strong></td>
<td>A</td>
<td>B</td>
<td>Y</td>
</tr>
<tr>
<td><strong>Low Group</strong></td>
<td>C</td>
<td>D</td>
<td>Z</td>
</tr>
<tr>
<td><strong>Column Total</strong></td>
<td>W</td>
<td>X</td>
<td>Grand Total</td>
</tr>
</tbody>
</table>

Key Indicator Statistical Methodology (Calculating the Phi Coefficient):

\[
\phi = \frac{(A)(D) - (B)(C)}{\sqrt{(W)(X)(Y)(Z)}}
\]

- \(A = \text{High Group} + \text{Programs in Compliance on Specific Compliance Measure.}\)
- \(B = \text{High Group} + \text{Programs out of Compliance on Specific Compliance Measure.}\)
- \(C = \text{Low Group} + \text{Programs in Compliance on Specific Compliance Measure.}\)
- \(D = \text{Low Group} + \text{Programs out of Compliance on Specific Compliance Measure.}\)
- \(W = \text{Total Number of Programs in Compliance on Specific Compliance Measure.}\)
- \(X = \text{Total Number of Programs out of Compliance on Specific Compliance Measure.}\)
- \(Y = \text{Total Number of Programs in High Group.}\)
- \(Z = \text{Total Number of Programs in Low Group.}\)

<table>
<thead>
<tr>
<th>Phi Coefficient Range</th>
<th>Characteristic of Indicator</th>
<th>Decision</th>
</tr>
</thead>
<tbody>
<tr>
<td>(+1.00) – (+.26)</td>
<td>Good Predictor</td>
<td>Include on KSKI</td>
</tr>
<tr>
<td>(+.25) – (0)</td>
<td>Too Easy</td>
<td>Do not Include</td>
</tr>
<tr>
<td>(0) – (−.25)</td>
<td>Too Difficult</td>
<td>Do not Include</td>
</tr>
<tr>
<td>(−.26) – (−1.00)</td>
<td>Terrible Predictor</td>
<td>Do not Include</td>
</tr>
</tbody>
</table>

*High Group = Top 25% of Programs in Compliance with all Compliance Measures.*

*Low Group = Bottom 25% of Programs in Compliance with all Compliance Measures.*
FIGURE 1 - DIFFERENTIAL MONITORING LOGIC MODEL AND ALGORITHM (Fiene, 2012)

*DMLMA*© Applied to the Kansas Child Care Licensing System

\[ \text{CI} + \text{PQ} \Rightarrow \text{RA} + \text{KI} \Rightarrow \text{DM} \]

**Kansas Examples:**

- **CI** = Licensing Reviews (All Rules)
- **PQ** = Not Applicable (NA)
- **RA** = Not Applicable (NA)
- **KI** = Key Indicators (generated from this study)
- **DM** = Not Applicable (NA)

**DMLMA© Thresholds:**

- **High Correlations (.70+) = CI x KI.**
- **Moderate Correlations (.50+) = CI x RA; RA x DM; RA x KI; KI x DM.**
- **Lower Correlations (.30+) = PQ x CI; PQ x RA; PQ x KI.**
Table 5 – Rule Numbers and Phi Coefficients for Centers and Homes

<table>
<thead>
<tr>
<th>Centers</th>
<th>Rule</th>
<th>Phi</th>
</tr>
</thead>
<tbody>
<tr>
<td>K.A.R.28-4-126b1.</td>
<td></td>
<td>.59</td>
</tr>
<tr>
<td>K.A.R.28-4-126c1.</td>
<td></td>
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</tr>
<tr>
<td>K.A.R.28-4-423a18.</td>
<td></td>
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<td>K.A.R.28-4-423a23.</td>
<td></td>
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</tr>
<tr>
<td>K.A.R.28-4-428aa3.</td>
<td></td>
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<tr>
<td>K.A.R.28-4-428ae1.</td>
<td></td>
<td>.53</td>
</tr>
<tr>
<td>K.A.R.28-4-430c3.</td>
<td></td>
<td>.54</td>
</tr>
<tr>
<td>K.A.R.28-4-437d.</td>
<td></td>
<td>.59</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Homes</th>
<th>Rule</th>
<th>Phi</th>
</tr>
</thead>
<tbody>
<tr>
<td>K.A.R.28-4-115g1.</td>
<td></td>
<td>.47</td>
</tr>
<tr>
<td>K.A.R.28-4-115aa1A.</td>
<td></td>
<td>.79</td>
</tr>
<tr>
<td>K.A.R.28-4-115aa1B.</td>
<td></td>
<td>.44</td>
</tr>
<tr>
<td>K.A.R.28-4-117a1.</td>
<td></td>
<td>.44</td>
</tr>
<tr>
<td>K.A.R.28-4-117c.</td>
<td></td>
<td>.68</td>
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<tr>
<td>K.A.R.28-4-127b1A.</td>
<td></td>
<td>.53</td>
</tr>
</tbody>
</table>

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NARA Illinois Key Indicator Report for Centers, Group Homes, and Family Homes

Richard Fiene, Ph.D.

May 30, 2014

ABSTRACT

This report will provide an analysis of Illinois Rules for child care centers, group homes, and family homes for generating key indicators. There is a brief introduction regarding differential monitoring and key indicators followed by the generated key indicators.

INTRODUCTION

The key indicator methodology is part of a program monitoring approach called Differential Program Monitoring which was developed to help streamline the program monitoring of early care and education programs (please see the appendix for two graphics which help to depict this relationship). It was first applied in child care licensing but has been used in many other service types, such as: Head Start Performance Standards, National Accreditation, and child and adult residential programs. The methodologies are based upon statistical protocols that have been developed in the tests and measurements literature in which an abbreviated set of items is used to statistically predict as if the full test was applied. This methodology has been used in regulatory analysis and is now being proposed for use in Quality Rating and Improvement Systems (QRIS).

TECHNICAL ASPECTS OF THE KEY INDICATOR METHODOLOGY

This section provides the technical and statistical aspects of the key indicator methodology. One of the first steps is to sort the data into high and low groups, generally the highest and lowest ratings can be used for this sorting. In very large states this is done on a sampling basis which
will be described later in the blueprint. Frequency data will be obtained on those programs in the top level (usually top 20-25%) and the bottom level (usually the bottom 20-25%). The middle levels are not used for the purposes of these analyses. These two groups (top level & the bottom level) are then compared to how each program scored on each item within the specific assessment tool (see Figure 1).

<table>
<thead>
<tr>
<th>Figure 1</th>
<th>Providers In Compliance or Top 25%</th>
<th>Programs Out Of Compliance or Bottom 25%</th>
<th>Row Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Highest level (top 20-25%)</td>
<td>A</td>
<td>B</td>
<td>Y</td>
</tr>
<tr>
<td>Lowest level (bottom 20-25%)</td>
<td>C</td>
<td>D</td>
<td>Z</td>
</tr>
<tr>
<td>Column Total</td>
<td>W</td>
<td>X</td>
<td>Grand Total</td>
</tr>
</tbody>
</table>

Once the data are sorted in the above matrix, the following formula (Figure 2) is used to determine if the standard is a key indicator or not by calculating its respective Phi coefficient. Please refer back to Figure 1 for the actual placement within the cells. The legend (Figure 3) below the formula shows how the cells are defined.

**Figure 2 – Formula for Phi Coefficient**

\[ \phi = \frac{(A)(D)-(B)(C)}{\sqrt{(W)(X)(Y)(Z)}} \]

**Figure 3 – Legend for the Cells within the Phi Coefficient**

- \(A\) = High Group + Programs in Compliance on Specific Compliance Measure.
- \(B\) = High Group + Programs out of Compliance on Specific Compliance Measure.
- \(C\) = Low Group + Programs in Compliance on Specific Compliance Measure.
- \(D\) = Low Group + Programs out of Compliance on Specific Compliance Measure.
- \(W\) = Total Number of Programs in Compliance on Specific Compliance Measure.
- \(X\) = Total Number of Programs out of Compliance on Specific Compliance Measure.
- \(Y\) = Total Number of Programs in High Group.
- \(Z\) = Total Number of Programs in Low Group.
Once the data are run through the formula in Figure 2, the following chart (Figure 4) can be used to make the final determination of including or not including the item as a key indicator. Based upon the chart in Figure 4, it is best to have a Phi Coefficient approaching +1.00 however that is rarely attained with licensing data but has occurred in more normally distributed data. Continuing with the chart in Figure 5, if the Phi Coefficient is between +.25 and -.25, this indicates that the indicator is unpredictable in being able to predict overall compliance with the quality rating assessment tool. Either a false positive in which the indicator appears too often in the low group as being in compliance, or a false negative in which the indicator appears too often in the high group as being out of compliance. This can occur with Phi Coefficients above +.25 but it becomes unlikely as we approach +1.00 although there is always the possibility that other standards/rules/regulations could be found out of compliance (this was demonstrated in a study conducted by the author. Another solution is to increase the number of key indicators to be reviewed but this will cut down on the efficiency which is desirable and the purpose of the key indicators.

The last possible outcome with the Phi Coefficient is if it is between -.26 and -1.00, this indicates that the indicator is a terrible predictor because it is doing just the opposite of the decision we want to make. The indicator would predominantly be in compliance with the low group rather than the high group so it would be statistically predicting overall non-compliance. This is obviously something we do not want to occur.

**Figure 4 – Thresholds for the Phi Coefficient**

<table>
<thead>
<tr>
<th>Phi Coefficient Range</th>
<th>Characteristic of Indicator</th>
<th>Decision</th>
</tr>
</thead>
<tbody>
<tr>
<td>(+1.00) – (+.26)</td>
<td>Good Predictor</td>
<td>Include</td>
</tr>
<tr>
<td>(+.25) – (-.25)</td>
<td>Unpredictable</td>
<td>Do not Include</td>
</tr>
<tr>
<td>(-.26) – (-1.00)</td>
<td>Terrible Predictor</td>
<td>Do not Include</td>
</tr>
</tbody>
</table>
RESULTS

Key indicators for child care homes (Please see the Appendix - Figure 7 for Phi Coefficients):

Section 406.8 General Requirements for Day Care Homes
a) The physical facilities of the home, both indoors and outdoors, shall meet the following requirements for safety to children.
   1) The home shall have a first aid kit consisting of adhesive bandages, scissors, thermometer, non-permeable gloves, Poison Control Center telephone number (1-800-222-1222 or 1-800-942-5969), sterile gauze pads, adhesive tape, tweezers and mild soap.

18) There shall be written plans for fire and tornado emergencies. Caregivers and assistants in the home shall be familiar with these plans.
   A) The fire evacuation plan shall identify the exits from each area used for child care and shall specify the evacuation route.
   B) The fire evacuation plan shall identify a safe assembly area outside of the home. It shall also identify a near-by indoor location for post-evacuation holding if needed.
   C) The fire evacuation plan shall require that the home be evacuated before calling the local emergency number 911.
   D) The written tornado plan shall specify what actions will be taken in the event of tornado or other severe weather warning, including designation of those areas of the home to be used as the safe spots.

23) The licensee shall inspect the home daily, prior to arrival of children, ensuring that escape routes are clear and that exit doors and exit windows are operable. A log of these daily inspections shall be maintained for at least one year, and shall be available for review. The log shall reflect, at minimum, the date and time of each inspection and the full name of the person who conducted it.

24) The licensee shall hold monthly fire inspections of the day care home.

Section 406.9 Characteristics and Qualifications of the Day Care Family
a) No individual may receive a license from the Department when the applicant, a member of the household age 13 and over, or any individual who has access to the children cared for in a day care home, or any employee of the day care home, has not authorized the background check required by 89 Ill. Adm. Code 385 (Background Checks) and been cleared in accordance with the requirements of Part 385.
   1) The caregivers shall complete 15 clock hours of in-service training per licensing year in accordance with the requirements in Appendix D of the rules.
      1) Such training may be derived from programs offered by any of the entities identified in Appendix D of the rules.
      2) Courses or workshops to meet this requirement include, but are not limited to, those listed in Appendix D of the rules.
      3) The records of the day care home shall document the training in which the caregiver has participated, and these records shall be available for review by the Department.
      4) Caregivers obtaining clock hours in excess of the required 15 clock hours per year may apply up to 5 clock hours to the next year's training requirements.

Section 406.12 Admission and Discharge Procedures
b) Prior to acceptance of a child for care,
   3) The caregiver shall require that the parent or guardian provide a certified copy of the child’s birth certificate. The caregiver:
A) Shall provide a written notice to the parent or guardian of a child to be enrolled for the first time that within 30 days after enrollment the parent or guardian shall provide a certified copy of the child’s birth certificate or other reliable proof of identity and age of the child.

i) The caregiver shall promptly make a copy of the certified copy and return the original certified copy to the parent or guardian.

ii) If a certified copy of the birth certificate is not available, the parent or guardian must submit a passport, visa or other governmental documentation as proof of the child’s identity and age and an affidavit or notarized letter explaining the inability to produce a certified copy of the birth certificate [325 ILCS 50/5].

iii) The notice to parent or guardian shall also indicate that the caregiver is required by law to notify the Illinois State Police or local law enforcement agency if the parent or guardian fails to submit proof of the child’s identity within the 30 day time frame;

h) All day care homes shall have a written policy that explains the actions the provider will take if a parent or guardian does not retrieve, or arrange to have someone retrieve, his or her child at the designated, agreed upon time. The policy shall consist of the provider’s expectations, clearly presented to the parent or guardian, in the form of a written agreement that shall be signed by the parent or guardian, and shall include at least the following elements:

- The consequences of not picking up the child on time, including:
  - Amount of late fee, if any, and when those fees begin to accrue;
  - The degree of diligence the provider will use to reach emergency contacts, e.g., number of attempted phone calls to parents and emergency contacts, requests for police assistance in finding emergency contacts; and
  - Length of time the facility will keep the child beyond the pick-up time before contacting outside authorities, such as the child abuse hotline or police.

- Emphasis on the importance of having up-to-date emergency contact numbers on file.
- Acknowledgement of the provider’s responsibility for the child’s protection and well-being until the parent or outside authorities arrive.
- A reminder to the day care provider that the child is not responsible for the situation. All discussions regarding these situations shall be with the parent or guardian, never the child.

Section 406.14 Health, Medical Care and Safety

c) A medical report, on forms prescribed by the Department, shall be on file for each child, on the first day of care, and shall be dated no earlier than 6 months prior to enrollment.

1) The medical report shall be valid for 2 years, except that subsequent examinations for school-age children shall be in accordance with the requirements of Section 27.8-1 of the School Code [105 ILCS 5/27-8.1], provided copies of the exam are on file at the facility.

2) If the child is in a high risk group, as determined by the examining physician, a tuberculin skin test by the Mantoux method and the results of that test shall be included in the initial examination for all children who have attained one year of age, or at the age of one year for children who are enrolled before their first birthday. The tuberculin skin test by the Mantoux method shall be repeated when the children in high-risk groups begin elementary and secondary school.

3) The initial examination shall show that children from 6 months through 6 years of age have been screened for lead poisoning for children residing in an area defined as high risk by the Illinois Department of Public Health in its Lead Poisoning Prevention Code (77 III. Adm. Code 845) or that a lead risk assessment has been completed for children residing in an area defined as low risk by the Illinois Department of Public Health.

4) The report shall indicate that the child has been immunized as required by the rules of the Illinois Department of Public Health for immunizations (77 III. Adm. Code 695). These required immunizations are poliomyelitis, measles, rubella, diphtheria, mumps, pertussis, tetanus, hepatitis B, haemophilus influenza B, and varicella (chickenpox) or provide proof of immunity according to requirements in Part 695.50 of the Department of Public Health.
Key indicators for Group Child Care Homes (Please see the Appendix - Figure 7 for Phi Coefficients):

Section 408.35 General Requirements for Group Day Care Home Family
f) The caregivers and all members of the household shall provide medical evidence that they are free of communicable disease that may be transmitted while providing child care; and, in the case of caregivers, that they are free of physical or mental conditions that could interfere with child care responsibilities. The medical report for the caregivers shall be valid for 3 years.

Section 408.45 Caregivers
f) The caregivers shall complete 15 clock hours of in-service training per licensing year in accordance with the requirements in Appendix G of the rules.
1) Such training may be derived from programs offered by any of the entities identified in Appendix G of the rules.
2) Courses or workshops to meet this requirement include, but are not limited to, those listed in Appendix G of the rules.

Section 408.60 Admission and Discharge Procedures
j) All group day care homes shall have a written policy that explains the actions the provider will take if a parent or guardian does not retrieve, or arrange to have someone retrieve, his or her child at the designated, agreed upon time. The policy shall consist of the provider's expectations, clearly presented to the parent or guardian in the form of a written agreement that shall be signed by the parent or guardian, and shall include at least the following elements:
1) The consequences of not picking up the children on time, including:
   A) Amount of late fee, if any, and when those fees begin to accrue;
   B) The degree of diligence the provider will use to reach emergency contacts, e.g., number of attempted phone calls to parents and emergency contacts, requests for police assistance in finding emergency contacts; and
   C) Length of time the facility will keep the child beyond the pick-up time before contacting outside authorities, such as the child abuse hotline or police.
2) Emphasis on the importance of having up-to-date emergency contact numbers on file.
3) Acknowledgement of the provider's responsibility for the child's protection and well-being until the parent or outside authorities arrive.
4) A reminder to staff that the child is not responsible for the situation. All discussions regarding these situations shall be with the parent or guardian, never with the child.

Section 408.70 Health, Medical Care and Safety
a) A medical report, on forms prescribed by the Department, shall be on file for each child, on the first day of care, and shall be dated no earlier than 6 months prior to enrollment.
1) The medical report shall be valid for 2 years, except that subsequent examinations for school-age children shall be in accordance with the requirements of Section 27-8.1 of the School Code [105 ILCS 5/27-8.1], provided copies of the exam are on file at the facility.
2) If the child is in a high risk group, as determined by the examining physician, a tuberculin skin test by the Mantoux method and the results of that test shall be included in the initial examination for all children who have attained one year of age, or at the age of one year for children who are enrolled before their first birthday. The tuberculin skin test by the Mantoux method shall be repeated when children in high risk groups begin elementary and secondary school.
3) The initial examination shall show that children from 6 months through 6 years of age have been screened for lead poisoning for children residing in an area defined as high risk by the Illinois Department of Public Health in its Lead Poisoning Prevention Code (77 Ill. Adm. Code 845) or that a lead risk assessment has been completed for children residing in an area defined as low risk by the Illinois Department of Public Health.
4) The report shall indicate that the child has been immunized as required by the rules of the Illinois Department of Public Health for immunizations (77 Ill. Adm. Code 695). These required immunizations are poliomyelitis, measles, rubella, diphtheria, mumps, pertussis, tetanus, hepatitis B, haemophilus influenza B, and varicella (chickenpox) or provide proof of immunity according to requirements in Part 695.50 of the Department of Public Health.
Section 408.120  Records and Reports

a) A facility shall maintain a record file on the children enrolled.
   1) A written application for admission of each child shall be on file with the signature of the parent or guardian.
Key indicators for Child Care Centers (Please see the Appendix-Figure 7 for Phi Coefficients):

Section 407.100  General Requirements for Personnel
f) Staff shall have physical re-examinations every two years and whenever communicable disease or illness is suspected.

Section 407.120  Personnel Records
a) A confidential file shall be maintained on each staff person and contain at least the following information:
   1) A copy of a form prescribed by the Department which contains information on persons employed in the day care center;
   3) Three written character references, verified by the day care center;
   4) Proof of educational achievement as required for the individual's position. Foreign credentials require additional documentation providing a statement of the equivalency in the U.S. educational system;

Section 407.250  Enrollment and Discharge Procedures
d) The facility shall distribute a summary of the licensing standards, provided by the Department, to the parents or guardian of each child at the time that the child is accepted for care in the facility. In addition, consumer information materials provided by the Department including, but not limited to, information on reporting and prevention of child abuse and neglect and preventing and reporting communicable disease shall be distributed to the parents or guardian of each child cared for when designated for such distribution by the Department.

Section 407.260  Daily Arrival and Departure of Children
f) All day care centers shall have a written policy that explains to parents and staff the actions the center will take if a parent or guardian does not pick up, or arrange to have someone pick up, his or her child at the designated, agreed upon time. The policy shall consist of the provider's expectations clearly presented to the parent or guardian in the form of a written agreement that shall be signed by the parent or guardian and shall include at least the following elements:
   1) The consequences of not picking up children on time shall be precisely communicated to parents, for example:
      A) Amount of late fee, if any, and when those fees begin to accrue.
      B) The degree of diligence the provider will use to reach emergency contacts, e.g., number of attempted phone calls to parents and emergency contacts, requests for police assistance in finding emergency contacts, and so forth.
      C) Length of time the facility will keep the child beyond the pick-up time before contacting outside authorities, such as, the child abuse hotline, police, and so forth.
   2) Emphasis on the importance of having up-to-date emergency contact numbers on file.
   3) Acknowledgement of the provider's responsibility for the child's protection and well-being until the parent or outside authorities arrive.
   4) A policy that staff shall not hold the child responsible for the situation and that discussion of this issue will only be with the parent or guardian and never with the child.

Section 407.270  Guidance and Discipline
a) The day care center shall develop a guidance and discipline policy for staff use that is also provided to parents. Staff shall sign the guidance and discipline policy at the time of employment and parents shall sign the policy when their child is enrolled. The policy shall include:
   1) A statement of the center's philosophy regarding guidance and discipline;
   2) Information on how discipline will be implemented by staff;
   3) Information on how parents will be involved in the guidance and discipline process;
   4) Information on how children will be involved in the guidance and discipline process; and
   5) Written procedures for termination of a child's enrollment in the day care center because of disciplinary issues.

Section 407.310  Health Requirements for Children
a) A medical report on forms prescribed by the Department shall be on file for each child.
   1) The initial medical report shall be dated less than 6 months prior to enrollment of infants, toddlers and preschool children. For school-age children, a copy of the most recent regularly scheduled school physical may be submitted
(even if more than 6 months old) or the day care center may require a more recent medical report by its own enrollment policy. If a health problem is suspected, the day care center may require additional documentation of the child's health status.

**Section 407.380 Equipment and Materials**

b) Such equipment and materials for infants, toddlers and pre-school children shall be provided in the quantity and variety specified in Appendix A: Equipment for Infants and Toddlers, Appendix B: Equipment for Preschool Children and Appendix C: Equipment for School-Age Children of the Rules.
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Appendix – Figure 5

DIFFERENTIAL MONITORING LOGIC MODEL & ALGORITHM (DMLMA©) (Fiene, 2012): A 4\textsuperscript{th} Generation ECPQIM – Early Childhood Program Quality Indicator Model

\[ \text{CI} \times \text{PQ} \Rightarrow \text{RA} + \text{KI} \Rightarrow \text{DM} + \text{PD} \Rightarrow \text{CO} \]

Definitions of Key Elements:

- **PC** = Program Compliance/Licensing (Health and Safety) (*Caring for Our Children*)
- **PQ** = QRIS/Accreditation/Caregiver/Child Interactions/Classroom Environment Quality (*ERS/CLASS/PAS/BAS*)
- **RA** = Risk Assessment, (High Risk Rules) (*Stepping Stones*)
- **KI** = Key Indicators (Predictor Rules) (*13 Key Indicators of Quality Child Care*)
- **DM** = Differential Monitoring (How often to visit and what to review)
- **PD** = Professional Development/Technical Assistance/Training (Not pictured but part of Model)
- **CO** = Child Outcomes (Not pictured but part of Model)
Appendix – Figure 6 - Licensing Rules, Compliance Reviews, Differential Monitoring, Abbreviated Tools, Risk Assessment, and Key Indicators
## Appendix -- Figure 7 - Phi Coefficients for the Specific Key Indicators

### Family Child Care Homes:

<table>
<thead>
<tr>
<th>Rule Numbers</th>
<th>Phi</th>
<th>Content</th>
</tr>
</thead>
<tbody>
<tr>
<td>406.8a1</td>
<td>.34</td>
<td>First Aid Kit</td>
</tr>
<tr>
<td>406.8a18</td>
<td>.38</td>
<td>Emergency Plan</td>
</tr>
<tr>
<td>406.8a23</td>
<td>.36</td>
<td>Fire Inspection</td>
</tr>
<tr>
<td>406.8a24</td>
<td>.35</td>
<td>Log of Home Inspections</td>
</tr>
<tr>
<td>406.9a</td>
<td>.34</td>
<td>Background Checks</td>
</tr>
<tr>
<td>406.9t</td>
<td>.38</td>
<td>Caregiver Training</td>
</tr>
<tr>
<td>406.12b3</td>
<td>.34</td>
<td>Birth Certificate</td>
</tr>
<tr>
<td>406.12h</td>
<td>.36</td>
<td>Agreement regarding Pick Up</td>
</tr>
<tr>
<td>406.14c2</td>
<td>.41</td>
<td>TB Test</td>
</tr>
<tr>
<td>406.14c3</td>
<td>.53</td>
<td>Lead Poisoning Screening</td>
</tr>
<tr>
<td>406.14c4</td>
<td>.34</td>
<td>Immunizations</td>
</tr>
</tbody>
</table>

### Group Child Care Homes:

<table>
<thead>
<tr>
<th>Rule Numbers</th>
<th>Phi</th>
<th>Content</th>
</tr>
</thead>
<tbody>
<tr>
<td>408.35f</td>
<td>.28</td>
<td>Communicable Diseases</td>
</tr>
<tr>
<td>408.45f</td>
<td>.31</td>
<td>Caregiver Training</td>
</tr>
<tr>
<td>408.60j</td>
<td>.33</td>
<td>Agreement Pick Up Policy</td>
</tr>
<tr>
<td>408.70a1</td>
<td>.29</td>
<td>Medical Records</td>
</tr>
<tr>
<td>408.70a2</td>
<td>.55</td>
<td>TB Test</td>
</tr>
<tr>
<td>408.70a3</td>
<td>.51</td>
<td>Lead Poisoning Screening</td>
</tr>
<tr>
<td>408.70a4</td>
<td>.35</td>
<td>Immunizations</td>
</tr>
<tr>
<td>408.120a1</td>
<td>.37</td>
<td>Written Application Admission for Each Child</td>
</tr>
</tbody>
</table>

### Child Care Centers:

<table>
<thead>
<tr>
<th>Rule Numbers</th>
<th>Phi</th>
<th>Content</th>
</tr>
</thead>
<tbody>
<tr>
<td>407.100f</td>
<td>.35</td>
<td>Staff Physical</td>
</tr>
<tr>
<td>407.120a1</td>
<td>.32</td>
<td>CFS-508 Form</td>
</tr>
<tr>
<td>407.120a3</td>
<td>.41</td>
<td>Three Written Character References</td>
</tr>
<tr>
<td>407.120a4</td>
<td>.34</td>
<td>Proof of Educational Achievement</td>
</tr>
<tr>
<td>407.250d</td>
<td>.34</td>
<td>Written Standards Given to Parents</td>
</tr>
<tr>
<td>407.260f</td>
<td>.32</td>
<td>Pick Up Policy</td>
</tr>
<tr>
<td>407.270a</td>
<td>.32</td>
<td>Discipline Policy</td>
</tr>
<tr>
<td>407.310a</td>
<td>.44</td>
<td>Medical Report for Each Child</td>
</tr>
<tr>
<td>407.380b</td>
<td>.34</td>
<td>Equipment Meets Standard Requirements</td>
</tr>
</tbody>
</table>
ABSTRACT

This report will provide a blueprint for Oregon’s Early Care and Education/Child Care program monitoring system in developing a Differential Program Monitoring, Risk Assessment, and Key Indicator approach to help streamline their present licensing process. The report will be organized into the following major headings: an introduction to the differential monitoring methodology; how key indicators and risk assessment fit into the larger program monitoring of early care and education programs; how key indicators and risk assessment will be applied to Oregon’s system in particular; the technical aspects of differential monitoring, risk assessment and key indicator methodology, the sample to be drawn from the population, potential results from the analyses; a timeline for this developmental effort; and potential cost savings from the approach.

INTRODUCTION

The Risk Assessment, Key Indicator, and Differential Program Monitoring Methodologies were developed to help streamline the program monitoring of early care and education programs. It was first applied in child care licensing (Fiene & Nixon, 1985) but has been used in many other service types, such as: Head Start Performance Standards (Fiene, 2013a), National Accreditation (Fiene, 1996), and child and adult residential programs (Kroh & Melusky, 2010). The methodologies are based upon statistical protocols that have been developed in the tests and measurements literature in which an abbreviated set of items is used to statistically predict as if the full test was applied. This methodology has been used in regulatory analysis and more recently has been proposed for use in Quality Rating and Improvement Systems (QRIS) (Fiene, 2013b).
DIFFERENTIAL PROGRAM MONITORING

Risk Assessment and Key Indicators are important components of differential program monitoring which employs an abbreviated review rather than a comprehensive or full review of a program. It is one of several key elements that have been identified in the research literature to help improve the cost effectiveness and efficiency of the program monitoring of early care and education programs (Fiene, 2013b, c)(See the Appendix). A recent addition to differential monitoring are QRIS – Quality Rating and Improvement Systems. Key indicators have a long history of development within the licensing literature (Fiene & Kroh, 2000) but have only recently been proposed to be used with QRIS. This proposed blueprint is to assist Oregon to develop a fully functional differential program monitoring, risk assessment, and key indicator approach to their child care licensing system and then determine the feasibility of using the these approaches with its QRIS system.

The other key elements of the differential program monitoring approach are the following: program compliance/licensing which is generally a state’s health and safety rules/regulations that govern child care. At the national level this would be Caring for Our Children: National Performance Standards for Health and Safety in Child Care (2012). The program quality key element is generally represented by the state’s QRIS. At the national level it is represented by accreditation, such as NAEYC, NECPA, or NAFCC. The key indicator element is represented by the state’s statistical predictor rules/regulations drawn from their comprehensive set of health and safety rules/regulations that govern child care. At the national level, an example is the 13 Indicator of Quality Child Care (2002). This element can also represent a state’s statistical predictor QRIS standards drawn from the comprehensive set of QRIS standards. The purpose of this Blueprint Report is to develop these statistically predictor standards first for Oregon’s child care licensing system and explore the possibility of expanding this to their QRIS system. The last key element to be addressed in this report is the risk assessment key element in which these are the high risk rules/regulations that place children at greatest risk of mortality or morbidity. At the national level, an example is Stepping Stones to Caring for Our Children (2013). These are generally determined via a weighting system in licensing or a point system with QRIS.

KEY INDICATORS APPLIED TO OREGON’S CHILD CARE LICENSING SYSTEM

Oregon’s licensing and QRIS systems are very similar to many other states’ licensing and QRIS systems so that the methodologies employed in the past for developing risk assessment and key indicators will be employed in this blueprint. There are some significant challenges because of the psychometric properties of licensing data because of the severe skewness and kurtosis
present in state data systems. These challenges will be addressed later in this blueprint in how to deal skewness and kurtosis.

The risk assessment and key indicators can eventually be tied to the professional development/training/technical assistance system to link resources to specific needs of the programs. It also has the capability of tying them to an early learning benchmarking and child outcomes at some point in the future. This would be accomplished in the full implementation of the Differential Monitoring Logic Model and Algorithm (DMLMA©) as depicted in the Appendix.

### TECHNICAL ASPECTS OF THE KEY INDICATOR METHODOLOGY

This section provides the technical and statistical aspects of the key indicator methodology. It will provide the roadmap in taking the Oregon licensing and QRIS data bases through the necessary steps to generating the respective key indicators.

One of the first steps is to sort the data into high and low groups, generally the highest and lowest ratings can be used for this sorting. In very large states this is done on a sampling basis which will be described later in the blueprint. Frequency data will be obtained on those programs in the top level (usually top 20-25%) and the bottom level (usually the bottom 20-25%). The middle levels are not used for the purposes of these analyses. These two groups (top level & the bottom level) are then compared to how each program scored on each item within the specific assessment tool (see Figure 1). An example would be the following: Item 16 from the ECERS – Encouraging Children to Communicate. Sort all the providers by the number in the highest group and the lowest. Then determine how each program scored on item 16, did they get a 5 or higher or a 3 and lower? Fill in the cells within Figure 1 accordingly (see Figure 2).

<table>
<thead>
<tr>
<th>Figure 1</th>
<th>Providers In Compliance or Top 25%</th>
<th>Programs Out Of Compliance or Bottom 25%</th>
<th>Row Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Highest level</td>
<td>A</td>
<td>B</td>
<td>Y</td>
</tr>
<tr>
<td>(top 20-25%)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lowest level</td>
<td>C</td>
<td>D</td>
<td>Z</td>
</tr>
<tr>
<td>(bottom 20-25%)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Column Total</td>
<td>W</td>
<td>X</td>
<td>Grand Total</td>
</tr>
</tbody>
</table>
Figure 2 depicts that all programs that were in the top 25% (5+ on ECERS, Item 16) were also in the highest rating while the bottom 25% (3 or lower on the ECERS, Item 16) were also in the lowest rating. The data depicted in Figure 2 are taken from studies completed in Pennsylvania in 2002 (Fiene, et al) and 2006 (Barnard, Smith, Fiene & Swanson) in which their quality rating and improvement system (QRIS), Keystone STARS, was validated. The reason for selecting this particular item from the ECERS is that it demonstrates a perfect phi coefficient in discriminating between the highest level and the lowest level. Most, if not all, of the licensing items that will attain the threshold levels to become key indicators will not approach this phi coefficient.

<table>
<thead>
<tr>
<th>Figure 2 – Pa. Study (Fiene, et al, 2002).</th>
<th>Providers In Compliance or Top 25%</th>
<th>Programs Out Of Compliance or Bottom 25%</th>
<th>Row Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Highest Star level in Pa.</td>
<td>117</td>
<td>0</td>
<td>117</td>
</tr>
<tr>
<td>Lowest Star level in Pa.</td>
<td>0</td>
<td>35</td>
<td>35</td>
</tr>
<tr>
<td>Column Total</td>
<td>117</td>
<td>35</td>
<td>152</td>
</tr>
</tbody>
</table>

Once the data are sorted in the above matrix, the following formula (Figure 3) is used to determine if Item 16 is a key indicator or not by calculating its respective Phi coefficient. Please refer back to Figure 1 for the actual placement within the cells and Figure 2 for the data within the cells. The legend (Figure 4) below the formula shows how the cells are defined.

**Figure 3 – Formula for Phi Coefficient**

\[ \phi = \frac{(A)(D)-(B)(C)}{\sqrt{(W)(X)(Y)(Z)}} \]

**Figure 4 – Legend for the Cells within the Phi Coefficient**

- \( A = \) High Group + Programs in Compliance on Specific Compliance Measure.
- \( B = \) High Group + Programs out of Compliance on Specific Compliance Measure.
- \( C = \) Low Group + Programs in Compliance on Specific Compliance Measure.
- \( D = \) Low Group + Programs out of Compliance on Specific Compliance Measure.
- \( W = \) Total Number of Programs in Compliance on Specific Compliance Measure.
- \( X = \) Total Number of Programs out of Compliance on Specific Compliance Measure.
- \( Y = \) Total Number of Programs in High Group.
- \( Z = \) Total Number of Programs in Low Group.
Once the data are run through the formula in Figure 3, the following chart (Figure 5) can be used to make the final determination of including or not including the item as a key indicator. Based upon the chart in Figure 5, it is best to have a Phi Coefficient approaching +1.00 since we are dealing with normally distributed data\(^1\). This requirement is relaxed with licensing rules & QRIS selected standards only (+.26 and higher) because the data are more skewed but this should not be the case as much with Oregon’s Quality Rating and Improvement System (QRIS).

Continuing with the chart in Figure 5, if the Phi Coefficient is between +.25 and -.25, this indicates that the indicator is unpredictable in being able to predict overall compliance with the quality rating assessment tool. Either a false positive in which the indicator appears too often in the low group as being in compliance, or a false negative in which the indicator appears too often in the high group as being out of compliance\(^2\). This can occur with Phi Coefficients above +.25 but it becomes unlikely as we approach +1.00 although there is always the possibility that other standards/rules/regulations could be found out of compliance (this was demonstrated in a study conducted by the author (Fiene, 2013c) with Head Start programs). Another solution is to increase the number of key indicators to be reviewed but this will cut down on the efficiency which is desirable and the purpose of the key indicators.

The last possible outcome with the Phi Coefficient is if it is between -.26 and -1.00, this indicates that the indicator is a terrible predictor because it is doing just the opposite of the decision we want to make. The indicator would predominantly be in compliance with the low group rather than the high group so it would be statistically predicting overall non-compliance. This is obviously something we do not want to occur.

**Figure 5 – Thresholds for the Phi Coefficient (Fiene & Nixon, 1983, 1985)**

<table>
<thead>
<tr>
<th>Phi Coefficient Range</th>
<th>Characteristic of Indicator</th>
<th>Decision</th>
</tr>
</thead>
<tbody>
<tr>
<td>(+1.00) – (+.26)</td>
<td>Good Predictor</td>
<td>Include</td>
</tr>
<tr>
<td>(+.25) – (-.25)</td>
<td>Unpredictable</td>
<td>Do not Include</td>
</tr>
<tr>
<td>(-.26) – (-1.00)</td>
<td>Terrible Predictor</td>
<td>Do not Include</td>
</tr>
</tbody>
</table>

The key indicators should then only be used with those programs who have attained the highest rating. It is not intended for those programs that have attained lower ratings. However, even with those programs that have attained the highest rating, every 3-5 years a full, comprehensive review using the full set of rules/standards for licensing and QRIS should occur (see Figure 6 for a graphical depiction). It is intended that a re-validation of the key indicators occur on a periodic basis to make certain that the key indicators have not changed because of differences in compliance history. This is an important and necessary step for the state to engage in to
ascertain the overall validity and reliability of the assessment system. Also there should not have been any major changes in the program while the key indicators are being administered, such as the director leaving or a large percentage of teachers leaving or enrollment increasing significantly, or a change in the licensing status of the program.

**Figure 6 - Proposed DMLMA System with Key Indicators (KI)**

*Use of Oregon Key Indicators (ORKI) for Licensing and/or QRIS with a Full Review every 4th Year*

![Diagram of Proposed DMLMA System with Key Indicators](image)

**TECHNICAL ASPECTS OF THE RISK ASSESSMENT METHODOLOGY**

The risk assessment methodology is very different from the key indicator methodology in that compliance history data are not utilized but rather a best practice ranking according to risk is used to determine which rules become core rules which have the greatest likelihood to place children at significant risk of morbidity or mortality. This is done by having a group of experts rank order all the rules on a Likert Scale from low risk to high risk of mortality or morbidity that non-compliance with the rule places children at. This is generally done on a 1-10 scale with 1 = low risk; 5 = medium risk; and 10 = high risk (see Figure 6A). The experts selected include but are not limited to licensing staff, policy makers, researchers, child care providers, advocacy groups, parents, and other significant stakeholders who will be impacted by the weighting of the rules.

**Figure 6A – Example of a Likert Scale for Measuring Risk to Children**

<table>
<thead>
<tr>
<th>Low Risk</th>
<th>Medium Risk</th>
<th>High Risk</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>7</td>
<td>8</td>
<td>9</td>
</tr>
<tr>
<td>10</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Once the data are collected from all the experts, it is averaged for each rule to determine its relative rank in comparison to all the other rules. A significantly high threshold or cut off point is determined so that no more than 5-10% of the rules become core rules. These core rules can then be used in a differential monitoring approach (to be described more fully in the next section)
and/or with the key indicators to complete abbreviated reviews of child care programs. It is recommended that such a practice of using both core rules and key indicators be used together because the state has the benefits of both methodologies in measuring risk and being able to statistically predict overall compliance with a very short list of rules.

TECHNICAL ASPECTS DIFFERENTIAL MONITORING METHODOLOGY

There are a couple of other key technical aspects that need to be in place for a differential monitoring system to work. The Differential Monitoring Logic Model and Algorithm (DMLMA©)(see the Appendix) is a 4th generational Early Childhood Program Quality Indicator Model4 (ECPQIM4©) in which the major monitoring systems in early care and education are integrated conceptually so that the overall early care and education system can be assessed and validated. With this new model, it is now possible to compare results obtained from licensing systems, quality rating and improvement systems (QRIS), risk assessment systems, key indicator systems, technical assistance, and child development/early learning outcome systems. The various approaches to validation are interposed within this model and the specific expected correlational thresholds that should be observed amongst the key elements of the model are suggested (see Figure 6B).

**Figure 6B – Inter-Correlational Threshold Matrix**

<table>
<thead>
<tr>
<th></th>
<th>PQ</th>
<th>RA</th>
<th>KI</th>
<th>DM</th>
<th>PD</th>
<th>CO</th>
</tr>
</thead>
<tbody>
<tr>
<td>CI</td>
<td>0.3</td>
<td>0.5</td>
<td>0.7</td>
<td>0.5</td>
<td>0.5</td>
<td>0.3</td>
</tr>
<tr>
<td>PQ</td>
<td></td>
<td></td>
<td></td>
<td>0.3</td>
<td>0.3</td>
<td>0.3</td>
</tr>
<tr>
<td>RA</td>
<td></td>
<td></td>
<td></td>
<td>0.5</td>
<td>0.5</td>
<td>0.5</td>
</tr>
<tr>
<td>KI</td>
<td></td>
<td></td>
<td></td>
<td>0.5</td>
<td>0.5</td>
<td>0.3</td>
</tr>
<tr>
<td>DM</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.5</td>
<td></td>
</tr>
<tr>
<td>PD</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.3</td>
</tr>
</tbody>
</table>
Key Elements (see the Appendix): CI = state or federal standards, usually rules or regulations that measure health and safety - Caring for Our Children or Head Start Performance Standards will be applicable here. PQ = Quality Rating and Improvement Systems (QRIS) standards at the state level; ERS (ECERS, ITERS, FDCRS), CLASS, or CDPES (Fiene, 2007). RA = risk assessment tools/systems in which only the most critical rules/standards are measured. Stepping Stones is an example of this approach. KI = key indicators in which only predictor rules/standards are measured. The Thirteen Indicators of Quality Child Care is an example of this approach. DM = differential monitoring decision making in which it is determined if a program is in compliance or not and the number of visits/the number of rules/standards are ascertained from a scoring protocol. PD = technical assistance/training and/or professional development system which provides targeted assistance to the program based upon the DM results. CO = child outcomes which assesses how well the children are developing which is the ultimate goal of the system.

Once the above key elements are in place, it is then possible to look at the relationships amongst them to determine if the system is operating as it was intended. This is done through a validation of the overall system and assessing the inter-correlations (Table 6B) to determine that the DM system is improving the health, safety, program quality and ultimately the overall development of the children it serves.

Oregon should use the following plan to implement the above approach:

STATE AGENCY PLAN (These Steps can be viewed as an overall plan as outlined in Zellman & Fiene (2012):

The first step in utilizing the DMLMA for a state is to take a close look at its Comprehensive Licensing Tool (CI) that it uses to collect violation data on all rules with all facilities in its respective state. If the state does not utilize a tool or checklist or does not review all violation data than it needs to consider these changes because the DMLMA is based upon an Instrument Based Program Monitoring System (IPM) which utilizes tools/checklists to collect data on all rules.

The second step for the state is to compare their state’s rules with the National Health and Safety Performance Standards (Caring for Our Children) to determine the overlap and coverage between the two. This is the first approach to validation which involves Standards review (Zellman & Fiene, 2012).

The third step for the state if it utilizes a Risk Assessment (RA) tool is to assess the relationship between this tool and Stepping Stones to determine the overlap and coverage between the two. This is a continuation of the first approach to validation which involves Standards review (Zellman & Fiene, 2012).
The fourth step for the state is to compare the results from the CI with the RA tools. This step is the second approach to validation which involves Measures (Zellman & Fiene, 2012). The correlation between CI and RA should be at the .50 level or higher (.50+) (see Figure 6B).

In the fifth step, if a state is fortunate enough to have a QRIS – Quality Rating and Improvement System in place and has sufficient program quality (PQ) data available then they will have the ability to compare results from their CI tool with their PQ tool and validate outputs by determining the relationship between compliance with health and safety rules (CI) and program quality (PQ) measures, such as the ERS’s, CLASS, CDPES, etc… This is a very important step because very few empirical demonstrations appear in the research literature regarding this relationship. This step is the third approach to validation which involves Outputs (Zellman & Fiene, 2012). It would be expected that lower correlations (.30+) would be found between CI and PQ because these tools are measuring different aspects of quality such as health & safety versus caregiver-child interactions or overall classroom quality.

The sixth step is for the state to generate a Key Indicator (KI) tool from the CI data base. Please see Fiene & Nixon (1985) and Fiene & Kroh (2000) for a detailed explanation of the methodology for generating a KI tool. This step is also part of the second approach to validation which involves Measures. The correlation between the CI and KI should be very high (.70+) because the KI is a subset of predictor rules taken from the CI data base. If a state did not want to use the KI methodology, a direct comparison could be drawn from The Thirteen Indicators of Quality Child Care (Fiene, 2002).

The seventh step for the state is to use the RA and KI tools together to determine overall compliance of facilities and how often and which rules will be monitored for future visits. This is the basic component of a Differential Monitoring (DM) approach and continues the second approach to validation (Measures). Also, this step should drive decisions within the technical assistance/training/professional development (PD) system in what resources are allocated to a particular facility. It would be expected that moderate correlations (.50+) would be found amongst RA, KI, DM, and PD.

The eighth and final step for the state is to compare the results from the various monitoring tools (CI, PQ, RA, KI) with any child development outcome (CO) data they collect. This is a relatively new area and few, if any, states at this point have this capability on a large scale. However, as Early Learning Networks and Standards are developed, this will become more common place. This step is the forth approach to validation which involves Outcomes (Zellman & Fiene, 2012). The correlations between CI, PQ, RA, KI and CO will be on the lower end (.30+) because there are so many other variables that impact children’s development other than child care facilities.

The last step is to present a logic model which depicts how a differential monitoring system could potentially be actually used in Oregon (see Figure 6C).
Figure 6C – Logic Model for Compliance Decisions

**Core Indicators Screener = CR + KI**

**Abbreviated Visit (AV)**

**Abbreviated Visit (AV)**

**Abbreviated Visit (AV)**

**Full Visit (FV)**

**Full Visit (FV)**

**Full Visit (FV)**

**Compliance Decisions:**

- **Core Indicators = Core Rules + Key Indicators** – this becomes a screening tool to determine if a program receives an AV or FV visit.
- **Core Indicators (100%)** = The next visit is a Abbreviated Visit. Every 3-4 years a Full Licensing Visit is conducted.
- **Core Indicators (not 100%)** = The next visit is a Full Licensing Visit where all rules are reviewed.
- **Compliance = 96%+ with all rules which indicates substantial to full compliance with all rules and 100% with Core Indicators. The next visit is an Abbreviated Visit.**
- **Non-compliance = less than 96% with all rules which indicates lower compliance with all rules. The next visit is a Full Visit Study.**

**SAMPLE**

Generally a sample is drawn from the population of early care and education facilities in respective states. Oregon will not be any different because of the size of the overall child care program. A random sample will be selected that represents the state population of child care programs. This will be determined by the number of programs, how the programs are distributed throughout the state, the size of the programs, the type of programs, etc… This will need to be determined once the actual implementation of this blueprint report is started. The author of this report can assist Oregon staff in how best to select the sample of programs.

**POTENTIAL CHALLENGES**

As mentioned earlier, the measurement issues with licensing data will provide challenges because of their data distributions. In the past when key indicators have been generated with
licensing data which are highly skewed, dichotomization of the data is regularly done\(^3\). Generally dichotomization of data should not be done with normally distributed data\(^4\); however, in this case with QRIS systems, it is appropriate to do so since the data lend themselves to being sorted into discrete categories, such as rating levels. The dichotomization will compare the lowest rating level with the highest rating level in order to generate the key indicators.

**Figure 7 – Data Distribution Comparisons of ERS, QRIS, and Licensing Data**

![Data Distribution Comparisons](image)

**TIMELINE**

As soon as all early care and education programs have gone through their assessment phase, it will be possible to do the calculations to determine the Phi Coefficients and generate the key indicators. I am guessing that this should not take any longer than 1 year but could be completed in a much shorter period of time if the assessments on individual programs could be moved up (see Figure 8). The analytical phase should take no longer than a month with an additional month to write up the report. A face to face presentation of the analyses could be done after these two months.

The timeline presented in Figure 8 can be adjusted to the specific needs for the Oregon system. The timeline is based upon previous projects and the average time to generate risk assessment
core rules and key indicators. Another consideration or task is the development of the policies and procedures to be developed and implemented regarding the use of key indicators. This was not specifically listed on the timeline because it is something that is generally developed throughout the project with feedback from all the stakeholders who will be impacted by the use of this new approach to assessment and monitoring.

**Figure 8 - OREGON DMLMA PROJECT TIMELINE**

<table>
<thead>
<tr>
<th>TASK</th>
<th>MONTHS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Collect Data</td>
<td>M1-M3</td>
</tr>
<tr>
<td>Sort Data</td>
<td>M2-3</td>
</tr>
<tr>
<td>Run Analyses</td>
<td>M3-5</td>
</tr>
<tr>
<td>Generate KI/RA</td>
<td>M6</td>
</tr>
<tr>
<td>Train on KI/RA</td>
<td>M6-7</td>
</tr>
<tr>
<td>KI/RA Reliable</td>
<td>M7-9</td>
</tr>
<tr>
<td>Implementation</td>
<td>M10-12</td>
</tr>
</tbody>
</table>

**Legend:**

KI – Key Indicators
RA – Risk Assessment

Collect Data – identify participant programs via sampling for KI and the stakeholders for RA.
Sort Data – KI - the individual programs are sorted into high and low groups representing the top 25% and the bottom 25% of programs as they have scored on the respective rules/standards.
Run Analyses – KI - each individual item within each of the assessment tools for every program will be compared to the sorting process of the high and low groups. RA – aggregate data into means for each rule, rank order the rules.
Generate KI/RA – a 2 x 2 matrix is constructed and the key indicators (KI) are generated from this matrix through the use of a phi coefficient. A final report will be delivered to Oregon executive staff for both KI and RA core indicator rules.
Training on KI/RA – all staff who will be using the KI/RA will be trained on its use.
KI/RA Reliability – reliability will be established by having two staff go out together and administer the key indicators separately and comparing their results.
Implementation – once reliability has been established, full implementation will begin.

**COST SAVINGS**

Again based upon previous studies most recently completed in California in 2010 ([http://www.myccl.ca.gov/res/docs/12022010HandoutStakeholderMeeting.pdf](http://www.myccl.ca.gov/res/docs/12022010HandoutStakeholderMeeting.pdf)), time savings of 50% have been attained by using a key indicator or abbreviated tool in completing assessments. It only makes sense that if an assessment can be completed in one hour rather than 2 – 4 hours that a state will see time savings. It is being assumed that equivalent savings should also be the case with Oregon’s licensing/QRIS although this cannot be made certain until the new key indicator or abbreviated tool is actually used for a period of time. Once the new key indicators are used for several months, comparisons could be made to when the full assessments were done.
CONCLUSION AND NEXT STEPS

This blueprint report has given the basic parameters to develop a differential monitoring, risk assessment, and key indicator approach to Oregon’s Licensing/QRIS systems. By following this blueprint Oregon staff should be able to fully implement the approach. Oregon staff would also need to determine if they have the internal capability for the development of the key indicators or if there will be the need to outsource certain aspects of the development. This will be an important consideration as Oregon moves forward with this project. I have provided two options for your consideration in moving forward.

Option 1 – Development of System Internally:

This would require either information systems or research & evaluation staff to analyze the data, generate core key indicator rules, and training of staff. I could provide the necessary consulting services to help the staff work through the methodology. This would probably require at least one face to face meeting with regular monthly conference calls between myself and staff. Discussions of the formatting of data and the types of analyses would be discussed and demonstrated.

Option 2 – Development of System Externally:

In this option I could do all the methodological work demonstrating how I would need the data sent to me, the analytical work in generating core key indicator rules, a report detailing the methodology and results. The only thing that Oregon staff would need to do is get the data to me, all other aspects of what is delineated in the timeline in Figure 8 would be completed by me. This would probably require several face to face trips to explain the process, the results, and do training of staff. Once everything was in place, Oregon staff would have a fully implemented system.

If the above options are of interest I can provide detailed budgets for either one or both.
Notes:

1. 4. The reason for pointing out the need to have a higher Phi Coefficient than what has been reported previously (Fiene & Nixon, 1983, 1985) is the fact that the dichotomization of data should only be used with skewed data and not normally distributed data because it will accentuate differences. However, since the purpose of the dichotomization of data is only for sorting into a high and low group, it would appear to be acceptable for this purpose (MacCallun, et al., 2002. On the practice of dichotomization of quantitative variables, *Psychological Methods, 7, 1*, 19-40.).

2. These results would show an increase in cells B and C in Figure 1 which is undesirable; it should always be the case where A + D > B + C for key indicators to maintain their predictive validity.

3. The distinction between making decisions with skewed (Licensing) as versus normally distributed (ERS) data is an important one because there is a greater likelihood with skewed data of introducing less than optimal programs into the high group when sorting programmatic data into high and low groups. This then makes it more difficult to identify the best programs. However, because of the distribution with skewed data the same cannot be said with the low group in which case it is relatively easy to identify the problem programs. This is not as much of a concern when the data are more normally distributed in which it is relatively easy to identify both the optimal and problem programs. This is an excellent example of the need of weighting of standards in order to increase the normal distribution of the data.
REFERENCES AND ADDITIONAL RELATED READINGS REGARDING DMLMA:


- Fiene (2002b). Improving child care quality through an infant caregiver mentoring project, Child and Youth Care Forum, 31(2), 75-83.


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Appendix

DIFFERENTIAL MONITORING LOGIC MODEL & ALGORITHM (DMLMA©) (Fiene, 2012): A 4th Generation ECPQIM – Early Childhood Program Quality Indicator Model

CI x PQ => RA + KI => DM + PD => CO

Definitions of Key Elements:

PC = Program Compliance/Licensing (Health and Safety) (Caring for Our Children)
PQ = QRIS/Accreditation/Caregiver/Child Interactions/Classroom Environment Quality (ERS/CLASS/PAS/BAS)
RA = Risk Assessment, (High Risk Rules) (Stepping Stones)
KI = Key Indicators (Predictor Rules) (13 Key Indicators of Quality Child Care)
DM = Differential Monitoring (How often to visit and what to review)
PD = Professional Development/Technical Assistance/Training (Not pictured but part of Model)
CO = Child Outcomes (Not pictured but part of Model)

Comprehensive Licensing Tool (CI)  
Structural Quality  

Program Quality Tool (PQ) - QRIS  
Process Quality  

Risk Assessment Tool (RA)  

Key Indicator Tool (KI)  

Differential Monitoring (DM)
OREGON’S STEPPING STONES\textsuperscript{1} RISK FACTORS ANALYSIS

The purpose of this analysis is to provide Oregon OCC with a basic risk factor analysis comparing its child care center rules to Stepping Stones (SS) standards. This analysis will delineate, based upon Stepping Stones’ major content areas (chapters from Caring for our Children (CFOC)), where there may be gaps in their child care center rules.

This analysis is a summary look at the comparison between Stepping Stones and Oregon’s Rules; it is now intended to be an in-depth crosswalk between the two sets of standards and rules. In order to do that type of analysis, Fiene’s Stepping Stones to Validate State Rules Template (2013) is the suggested source to use.

Table 1 provides the comparisons between Stepping Stones and the Oregon Child Care Center Rules in which a search of the rules was done to determine if the specific SS standard was present or not. Every time the search contained a match, it was recorded as a “1”. When there was no match, it was recorded as a “0”.

Table 1 – Comparison of Stepping Stones (SS) Standards and Oregon Child Care Center Rules

<table>
<thead>
<tr>
<th>SS</th>
<th>RULES</th>
<th>PERCENT</th>
<th>CONTENT AREA/RISK FACTOR</th>
</tr>
</thead>
<tbody>
<tr>
<td>14</td>
<td>11</td>
<td>79</td>
<td>STAFFING</td>
</tr>
<tr>
<td>9</td>
<td>5</td>
<td>56</td>
<td>PROGRAM ACTIVITIES FOR HEALTHY DEVELOPMENT</td>
</tr>
<tr>
<td>25</td>
<td>16</td>
<td>64</td>
<td>HEALTH PROMOTION/PROTECTION</td>
</tr>
<tr>
<td>13</td>
<td>10</td>
<td>77</td>
<td>NUTRITION AND FOOD SERVICE</td>
</tr>
<tr>
<td>20</td>
<td>12</td>
<td>60</td>
<td>FACILITIES, SUPPLIES, EQUIPMENT, ENVIRON HEALTH</td>
</tr>
<tr>
<td>21</td>
<td>7</td>
<td>33</td>
<td>PLAY AREAS/PLAYGROUNDS AND TRANSPORTATION</td>
</tr>
<tr>
<td>10</td>
<td>1</td>
<td>10</td>
<td>INFECTIOUS DISEASES</td>
</tr>
<tr>
<td>10</td>
<td>7</td>
<td>70</td>
<td>POLICIES</td>
</tr>
<tr>
<td>122</td>
<td>69</td>
<td>56.125</td>
<td>TOTAL</td>
</tr>
</tbody>
</table>

Legend for Table 1:

Nominal scaling to determine if the Oregon CCC Rules have any reference to the specific SS3 Standard.
It is scored 1/0 where 1 = Present and 0 = Absent. Percent is the total number of “1”. Higher the percent the better.

SS = STEPPING STONES STANDARDS
RULES = OREGON CHILD CARE CENTER RULES
PERCENT = RULES/SS
CONTENT = RISK FACTOR/SS/CFOC CHAPTER
This comparison was completed on the major chapter headings in *Stepping Stones* and *Caring for our Children* as delineated in the Content/Risk Factor Column in Table 1. The following table (Table 2) provides the detail of the contents of each content area/risk factor.

**Table 2 – Major Content/Risk Factor Areas (1-8) and Specific Content for Each Area**

| 1. STAFFING                                      | A. CHILD:STAFF RATIO AND GROUP SIZE  
|                                                | B. RECRUITMENT AND BACKGROUND SCREENING  
|                                                | C. DIRECTOR’S QUALIFICATIONS  
|                                                | D. TEACHER’S QUALIFICATIONS  
|                                                | E. PRE-SERVICE TRAINING  
|                                                | F. ORIENTATION TRAINING  
|                                                | G. FIRST AID AND CPR TRAINING  
|                                                | H. STAFF HEALTH  
| 2. PROGRAM ACTIVITIES FOR HEALTHY DEVELOPMENT   | A. PROGRAM ACTIVITIES FOR INFANTS, TODDLERS, PRESCHOOLERS, AND SCHOOL AGE CHILDREN  
|                                                | B. SUPERVISION AND DISCIPLINE  
|                                                | C. HEALTH INFORMATION SHARING  
|                                                | D. HEALTH EDUCATION FOR CHILDREN  
|                                                | E. HEALTH EDUCATION FOR STAFF  
|                                                | F. HEALTH EDUCATION FOR PARENTS  
| 3. HEALTH PROMOTION AND PROTECTION              | A. DAILY HEALTH CHECK  
|                                                | B. ROUTINE HEALTH SUPERVISION  
|                                                | C. PHYSICAL ACTIVITY AND LIMITING SCREEN TIME  
|                                                | D. SAFE SLEEP  
|                                                | E. ORAL HEALTH  
|                                                | F. DIAPERING AND CHANGING SOILED CLOTHING  
|                                                | G. HAND HYGIENE  
|                                                | H. EXPOSURE TO BODY FLUIDS  
|                                                | I. EMERGENCY PROCEDURES  
|                                                | J. CHILD ABUSE AND NEGLECT  
|                                                | K. INCLUSION/EXCLUSION DUE TO ILLNESS  
|                                                | L. CARING FOR CHILDREN WHO ARE ILL  
|                                                | M. MEDICATIONS  
| 4. NUTRITION AND FOOD SERVICE                   | A. MEAL SERVICE, SEATING, SUPERVISION  
|                                                | B. FOOD BROUGHT FROM HOME  
|                                                | C. KITCHEN AND EQUIPMENT  
|                                                | D. FOOD SAFETY  

| 5. FACILITIES, SUPPLIES, EQUIPMENT, AND ENVIRONMENTAL HEALTH | E. MEALS FROM OUTSIDE VENDORS OR CENTRAL KITCHEN  
F. NUTRITION LEARNING EXPERIENCES FOR CHILDREN  
G. NUTRITION EDUCATION FOR PARENTS |
| --- | --- |
| A. GENERAL LOCATION, LAYOUT, AND CONSTRUCTION OF THE FACILITY  
B. SPACE PER CHILD  
C. EXITS  
D. STEPS AND STAIRS  
E. EXTERIOR AREAS  
F. VENTILATION, HEATING, COOLING, AND HOT WATER  
G. LIGHTING  
H. NOISE  
I. ELECTRICAL FIXTURES AND OUTLETS  
J. FIRE WARNING SYSTEMS  
K. WATER SUPPLY AND PLUMBING  
L. SEWAGE AND GARBAGE  
M. INTEGRATED PEST MANAGEMENT  
N. PREVENTION AND MANAGEMENT OF TOXIC SUBSTANCES  
O. TOILET AND HANDWASHING AREAS  
P. DIAPER CHANGING AREAS  
Q. SLEEP AND REST AREAS |
| 6. PLAY AREAS/PLAYGROUNDS AND TRANSPORTATION | A. PLAYGROUND SIZE AND LOCATION  
B. USE ZONES AND CLEARANCE REQUIREMENTS  
C. PLAY AREA AND PLAYGROUND SURFACING  
D. INSPECTION OF PLAY AREAS AND EQUIPMENT  
E. ACCESS TO AND SAFETY AROUND BODIES OF WATER  
F. POOL EQUIPMENT AND MAINTENANCE  
G. WATER QUALITY OF POOLS  
H. TRANSPORTATION SAFETY |
| 7. INFECTIOUS DISEASES | A. HOW INFECTIONS SPREAD  
B. IMMUNIZATIONS  
C. RESPIRATORY TRACT INFECTIONS  
D. ENTERIC (DIARRHEAL) INFECTIONS AND HEPATITIS A VIRUS (HAV)  
E. SKIN AND MUCOUS MEMBRANE INFECTIONS |
Table 2 provides you with the specific content as it relates to the risk factors. Figures 1 and 2 as well as Table 3 will provide the comparison between SS standards and Oregon’s child care center rules by these content areas/risk factors.

Figure 1 does this comparison by listing for each content area/risk factor the frequency count where there is a match between rules and standards.

**Figure 1 – Comparing Stepping Stones (SS) Standards and Oregon’s Child Care Center Rules**

![Bar chart showing comparison between SS standards and rules](chart.png)

**Legend for Figure 1:**

1 = STAFFING  
2 = PROGRAM ACTIVITIES FOR HEALTHY DEVELOPMENT  
3 = HEALTH PROMOTION/PROTECTION  
4 = NUTRITION AND FOOD SERVICE
Figure 2 takes the data from Table 1 and Figure 1 and expresses the content areas/risk factors in the form of percents in which the percents represent the number of times the Oregon child care center rules and the Stepping Stones standards match.

It is evident from Table 1 and Figures 1 and 2 that the two areas where the greatest gap between the Stepping Stones standards and Oregon’s child care center rules is in the Infectious Diseases and Play Areas/Playgrounds and Transportation content areas/risk factors with a match rate of 10% and 33% respectively. The highest match rates are with the Staffing (79%) and Nutrition & Food Service (77%).
Based upon the above results there are some recommendations to be made where Oregon Office of Child Care staff may want to focus their attention for future rule formulation in the infectious diseases and the play area/playgrounds & transportation content areas.

Notes:
1 The reason for using Stepping Stones rather than Caring for our Children is that Stepping Stones are the selected standards from CFOC that place children at greatest risk of mortality and morbidity if the standards are not complied with.

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ABSTRACT

This report will provide a blueprint for Hawaii’s QRIS in developing a key indicator approach to help streamline their present assessment process. The report will be organized into the following major headings: an introduction to the key indicator methodology; how key indicators fit into the larger program monitoring of early care and education programs; how key indicators will be applied to QRIS and to Hawaii’s QRIS in particular; the technical aspects of the key indicator methodology, the sample to be drawn from the population, although the full population of early care and education programs may be able to be used; potential results from the analyses; a timeline for this developmental effort; and potential cost savings from the approach. This blueprint report will answer all the questions about developing key indicators for QRIS, the what, how, why, when, etc…

INTRODUCTION

The Key Indicator Methodology was developed to help streamline the program monitoring of early care and education programs. It was first applied in child care licensing (Fiene & Nixon, 1985) but has been used in many other service types, such as: Head Start Performance Standards (Fiene, 2013a), National Accreditation (Fiene, 1996), and child and adult residential programs (Kroh & Melusky, 2010). The methodology is based upon statistical protocols that have been developed in the tests and measurements literature in which an abbreviated set of items is used to statistically predict as if the full test was applied. This methodology has been used in regulatory analysis and more recently has been proposed for use in Quality Rating and Improvement Systems (QRIS) (Fiene, 2013b).
DIFFERENTIAL PROGRAM MONITORING

Key indicators are an important component of differential program monitoring which employs an abbreviated review rather than a comprehensive or full review of a program. It is one of several key elements that have been identified in the research literature to help improve the cost effectiveness and efficiency of the program monitoring of early care and education programs (Fiene, 2013b, c)(See the Appendix). A recent addition to differential monitoring are QRIS – Quality Rating and Improvement Systems. Key indicators have a long history of development within the licensing literature (Fiene & Kroh, 2000) but have only recently been proposed to be used with QRIS. This proposed blueprint is a first for a state to determine the feasibility of using the key indicator approach with its QRIS system.

The other key elements of the differential program monitoring approach are the following: program compliance/licensing which is generally a state’s health and safety rules/regulations that govern child care. At the national level this would be Caring for Our Children: National Performance Standards for Health and Safety in Child Care (2012). The program quality key element is generally represented by the state’s QRIS. At the national level it is represented by accreditation, such as NAEYC, NECPA, or NAFCC. The key indicator element is represented by the state’s statistical predictor rules/regulations drawn from their comprehensive set of health and safety rules/regulations that govern child care. At the national level, an example is the 13 Indicator of Quality Child Care (2002). This element can also represent a state’s statistical predictor QRIS standards drawn from the comprehensive set of QRIS standards. The purpose of this Blueprint Report is to develop these statistically predictor QRIS standards. The last key element to be addressed in this report is the risk assessment key element in which these are the high risk rules/regulations that place children at greatest risk of mortality or morbidity. At the national level, an example is Stepping Stones to Caring for Our Children (2013). These are generally determined via a weighting system in licensing or a point system with QRIS.

KEY INDICATORS APPLIED TO HAWAII’S QRIS

Hawaii’s QRIS is somewhat unique in that its assessment system is drawn very heavily from off-the-shelf assessment tools, such as the ERS’s, CLASS, PAS/BAS in addition to QRIS program standards. This will pose significant challenges because of the psychometric properties of these standardized tools. However, with that said, the key indicator methodology is drawn directly from the tests and measurements research literature in which it is an approach in taking a comprehensive test and reducing it down to a group of statistical predictor items. The key indicator methodology will not alter the scale structure of any of the assessment tools. The purpose of the key indicator methodology is to establish a protocol
so that a determination of a full score and the appropriate level can be statistically predicted from a smaller set of items from that respective tool, in Hawaii’s QRIS standards, ERS’s, CLASS, PAS/BAS, NAEYC, NAFCC.

The key indicators can eventually be tied to the professional development/training/technical assistance system to link resources to specific needs of the programs. It also has the capability of tying them to an early learning benchmarking and child outcomes at some point in the future. This would be accomplished in the full implementation of the Differential Monitoring Logic Model and Algorithm (DMLMA©) as depicted in the Appendix.

TECHNICAL ASPECTS OF THE KEY INDICATOR METHODOLOGY

This section provides the technical and statistical aspects of the key indicator methodology. It will provide the roadmap in taking the Hawaii QRIS data base through the necessary steps to generating the respective key indicators.

One of the first steps is to sort the data into high and low groups, generally the highest and lowest ratings can be used for this sorting. In very large states this is done on a sampling basis but in Hawaii’s case we should be able to use all the programs who participate in the QRIS and not take a sample. Frequency data will be obtained on those programs in the top level (usually top 20-25%) and the bottom level (usually the bottom 20-25%). The middle levels are not used for the purposes of these analyses. These two groups (top level & the bottom level) are then compared to how each program scored on each item within the specific assessment tool (see Figure 1). An example would be the following: Item 16 from the ECERS – Encouraging Children to Communicate. Sort all the providers by the number in the highest group and the lowest. Then determine how each program scored on item 16, did they get a 5 or higher or a 3 and lower? Fill in the cells within Figure 1 accordingly (see Figure 2).

<table>
<thead>
<tr>
<th>Figure 1</th>
<th>Providers In Compliance or Top 25%</th>
<th>Programs Out Of Compliance or Bottom 25%</th>
<th>Row Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Highest level (top 20-25%)</td>
<td>A</td>
<td>B</td>
<td>Y</td>
</tr>
<tr>
<td>Lowest level (bottom 20-25%)</td>
<td>C</td>
<td>D</td>
<td>Z</td>
</tr>
<tr>
<td>Column Total</td>
<td>W</td>
<td>X</td>
<td>Grand Total</td>
</tr>
</tbody>
</table>
Figure 2 depicts that all programs that were in the top 25% (5+ on ECERS, Item 16) were also in the highest rating while the bottom 25% (3 or lower on the ECERS, Item 16) were also in the lowest rating. The data depicted in Figure 2 are taken from studies completed in Pennsylvania in 2002 (Fiene, et al) and 2006 (Barnard, Smith, Fiene & Swanson) in which their quality rating and improvement system (QRIS), Keystone STARS, was validated.

<table>
<thead>
<tr>
<th>Figure 2 – Pa. Study (Fiene, etal, 2002).</th>
<th>Providers In Compliance or Top 25%</th>
<th>Programs Out Of Compliance or Bottom 25%</th>
<th>Row Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Highest Star level in Pa.</strong></td>
<td>117</td>
<td>0</td>
<td>117</td>
</tr>
<tr>
<td><strong>Lowest Star level in Pa.</strong></td>
<td>0</td>
<td>35</td>
<td>35</td>
</tr>
<tr>
<td><strong>Column Total</strong></td>
<td>117</td>
<td>35</td>
<td>152</td>
</tr>
</tbody>
</table>

Once the data are sorted in the above matrix, the following formula (Figure 3) is used to determine if Item 16 is a key indicator or not by calculating its respective Phi coefficient. Please refer back to Figure 1 for the actual placement within the cells and Figure 2 for the data within the cells. The legend (Figure 4) below the formula shows how the cells are defined.

**Figure 3 – Formula for Phi Coefficient**

\[
\phi = \frac{(A)(D)-(B)(C)}{\sqrt{(W)(X)(Y)(Z)}}
\]

**Figure 4 – Legend for the Cells within the Phi Coefficient**

- **A** = High Group + Programs in Compliance on Specific Compliance Measure.
- **B** = High Group + Programs out of Compliance on Specific Compliance Measure.
- **C** = Low Group + Programs in Compliance on Specific Compliance Measure.
- **D** = Low Group + Programs out of Compliance on Specific Compliance Measure.
- **W** = Total Number of Programs in Compliance on Specific Compliance Measure.
- **X** = Total Number of Programs out of Compliance on Specific Compliance Measure.
- **Y** = Total Number of Programs in High Group.
- **Z** = Total Number of Programs in Low Group.
Once the data are run through the formula in Figure 3, the following chart (Figure 5) can be used to make the final determination of including or not including the item as a key indicator. Based upon the chart in Figure 5, it is best to have a Phi Coefficient approaching +1.00 since we are dealing with normally distributed data. This requirement is relaxed with licensing rules & QRIS selected standards only (+.26 and higher) because the data are more skewed but this should not be the case as much with Hawaii’s Quality Rating and Improvement System (QRIS) data because the measures selected in the QRIS are mostly standardized tools with more normally distributed data.

Continuing with the chart in Figure 5, if the Phi Coefficient is between +.25 and -.25, this indicates that the indicator is unpredictable in being able to predict overall compliance with the quality rating assessment tool. Either a false positive in which the indicator appears too often in the low group as being in compliance, or a false negative in which the indicator appears too often in the high group as being out of compliance. This can occur with Phi Coefficients above +.25 but it becomes unlikely as we approach +1.00 although there is always the possibility that other standards/rules/regulations could be found out of compliance (this was demonstrated in a study conducted by the author (Fiene, 2013c) with Head Start programs). Another solution is to increase the number of key indicators to be reviewed but this will cut down on the efficiency which is desirable and the purpose of the key indicators.

The last possible outcome with the Phi Coefficient is if it is between -.26 and -1.00, this indicates that the indicator is a terrible predictor because it is doing just the opposite of the decision we want to make. The indicator would predominantly be in compliance with the low group rather than the high group so it would be statistically predicting overall non-compliance. This is obviously something we do not want to occur.

**Figure 5 – Thresholds for the Phi Coefficient (Fiene & Nixon, 1983, 1985)**

<table>
<thead>
<tr>
<th>Phi Coefficient Range</th>
<th>Characteristic of Indicator</th>
<th>Decision</th>
</tr>
</thead>
<tbody>
<tr>
<td>(+1.00) – (+.26)</td>
<td>Good Predictor</td>
<td>Include</td>
</tr>
<tr>
<td>(+.25) – (-.25)</td>
<td>Unpredictable</td>
<td>Do not Include</td>
</tr>
<tr>
<td>(-.26) – (-1.00)</td>
<td>Terrible Predictor</td>
<td>Do not Include</td>
</tr>
</tbody>
</table>

The key indicators should then only be used with those programs who have attained the highest rating. It is not intended for those programs that have attained lower ratings. However, even with those programs that have attained the highest rating, every 3-5 years a full, comprehensive
review using the full assessment tools and QRIS standards should occur (see Figure 6 for a graphical depiction). It is intended that a re-validation of the key indicators occur on a periodic basis to make certain that the key indicators have not changed because of differences in compliance history. This is an important and necessary step for the state to engage in to ascertain the overall validity and reliability of the assessment system. Also there should not have been any major changes in the program while the key indicators are being administered, such as the director leaving or a large percentage of teachers leaving or enrollment increasing significantly, or a change in the licensing status of the program.

**Figure 6 - Proposed DMLMA System with Key Indicators (KI)**

*Use of Hawaii Key Indicators (HIKI) for QRIS with a Full Review every 4th Year*

SAMPLE

Generally a sample is drawn from the population of early care and education facilities in the respective state. With this being said, the chances are the full population will be able to be used in Hawaii’s case because of the manageable number of facilities. This should be able to be done with centers as well as with homes²a.

POTENTIAL RESULTS

The potential results are drawn from previous studies conducted by the author (Fiene, 2013b) in which key indicators were generated for the ECERS-R and FCCERS-R. All the specific items in the ECERS-R and FCCERS-R were run through the Phi Coefficient formula in Figure 3 above after having sorted the data into a high group (5 or higher) and a low group (3 or less) for the overall ECERS-R and FCCERS-R scores. This same procedure will be followed with the Hawaii QRIS but in this case the individual ERS item score will be compared with the respective Star Levels which will be sorted into a high group (top Level) and a low group (bottom Level) in order to determine which individual ERS items become key indicators. This process will be repeated for all ERS items and then extended to CLASS and PAS/BAS items as well as QRIS standards and where appropriate to NAEYC and NAFCC items.
It is estimated from previous studies (Fiene, 2013a; 2013c; 2013d) that approximately 10% of the ERS, CLASS, PAS/BAS, NAEYC, NAFCC items & QRIS standards will become key indicators. If this holds true it will substantially reduce the total number of items to review for QRIS assessments. It is also expected that the Phi Coefficients will be very high at a .90 level or higher because of the dichotomization of the data which should be normally distributed rather than significantly skewed. Also there will be significant redundancy in the data because the rating levels are so much tied to the standardized assessments in that the ERS, CLASS, PAS/BAS, NAEYC, and NAFCC are directly cross-walked to increasing rating levels.

As mentioned earlier, the measurement issues with the various standardized tools will provide challenges because of their data distributions. In the past when key indicators have been generated with licensing data which are highly skewed, dichotomization of the data is regularly done. However, when one looks at Figure 7 it is clear that the standardized assessments are more normally distributed than skewed\(^3\). Generally dichotomization of data should not be done with normally distributed data\(^4\); however, in this case with Hawaii’s QRIS and how the standardized assessments are used to make decisions regarding rating levels, it is appropriate to do so since the data lend themselves to being sorted into discrete categories, such as rating levels. The dichotomization will compare the lowest rating level with the highest rating level in order to generate the key indicators.

Figure 7 – Data Distribution Comparisons of ERS, QRIS, and Licensing Data
TIMELINE

As soon as all early care and education programs have gone through their assessment phase, it will be possible to do the calculations to determine the Phi Coefficients and generate the key indicators. I am guessing that this should not take any longer than 1 year but could be completed in a much shorter period of time if the assessments on individual programs could be moved up (see Figure 8). The analytical phase should take no longer than a month with an additional month to write up the report. A face to face presentation of the analyses could be done after these two months.

The timeline presented in Figure 8 can be adjusted to the specific needs of Hawaii’s QRIS system. The timeline is based upon previous projects and the average time to generate key indicators. Another consideration or task is the development of the policies and procedures to be developed and implemented regarding the use of key indicators. This was not specifically listed on the timeline because it is something that is generally developed throughout the project with feedback from all the stakeholders who will be impacted by the use of this new approach to assessment and monitoring.

Figure 8 - HAWAII QRIS KEY INDICATOR (KI) PROJECT TIMELINE

<table>
<thead>
<tr>
<th>TASK</th>
<th>MONTHS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Collect Data</td>
<td>1</td>
</tr>
<tr>
<td>Sort Data</td>
<td>2</td>
</tr>
<tr>
<td>Run Analyses</td>
<td>3</td>
</tr>
<tr>
<td>Generate KI</td>
<td>4</td>
</tr>
<tr>
<td>Training on KI</td>
<td>5</td>
</tr>
<tr>
<td>KI Reliability</td>
<td>6</td>
</tr>
<tr>
<td>Implementation</td>
<td>7</td>
</tr>
</tbody>
</table>

Legend:
Collect Data – dependent upon the total number of programs participating it would be determined to collect data on all participants or to complete a sample.
Sort Data – the individual programs are sorted into high and low groups representing the top 25% and the bottom 25% of programs as they have scored on the respective assessment tools and standards.
Run Analyses – each individual item within each of the assessment tools for every program will be compared to the sorting process of the high and low groups.

Generate KI – a 2 x 2 matrix is constructed and the key indicators (KI) are generated from this matrix through the use of a phi coefficient. A final report will be delivered to Hawaii executive staff.

Training on KI – all staff who will be using the KI will be trained on its use.

KI Reliability – reliability will be established by having two staff go out together and administer the key indicators separately and comparing their results.

Implementation – once reliability has been established, full implementation will begin.

COST SAVINGS

Again based upon previous studies most recently completed in California in 2010 (http://www.mycll.ca.gov/res/docs/12022010HandoutStakeholderMeeting.pdf), time savings of 50% have been attained by using a key indicator or abbreviated tool in completing assessments. It only makes sense that if an assessment can be completed in one hour rather than 2 – 4 hours that a state will see time savings. It is being assumed that equivalent savings should also be the case with Hawaii’s QRIS although this cannot be made certain until the new key indicator or abbreviated tool is actually used for a period of time. Once the new key indicators are used for several months, comparisons could be made to when the full assessments were done.

CONCLUSION AND NEXT STEPS

This blueprint report has given the basic parameters to develop a key indicator approach to Hawaii’s QRIS assessment tools. By following this blueprint Hawaii staff should be able to fully implement the approach. Hawaii staff would also need to determine if they have the internal capability for the development of the key indicators or if there will be the need to outsource certain aspects of the development. This will be an important consideration as Hawaii moves forward with this project. I have provided two options for your consideration in moving forward.

Option 1 – Development of System Internally:

This would require either information systems or research & evaluation staff to analyze the data, generate key indicators for each assessment tool, and training of staff. I could provide the necessary consulting services to help the staff work through the methodology. This would probably require at least one face to face meeting with regular monthly conference calls between myself and staff. Discussions of the formatting of data and the types of analyses would be discussed and demonstrated.

Option 2 – Development of System Externally:

In this option I could do all the methodological work demonstrating how I would need the data sent to me, the analytical work in generating key indicators for each assessment tool, a report
detailing the methodology and results. The only thing that Hawaii staff would need to do is get the data to me, all other aspects of what is delineated in the timeline in Figure 8 would be completed by me. This would probably require several face to face trips to explain the process, the results, and do training of staff. Once everything was in place, Hawaii staff would have a fully implemented system.

If the above options are of interest I can provide detailed budgets for either one or both.

Notes:

1. The reason for pointing out the need to have a higher Phi Coefficient than what has been reported previously (Fiene & Nixon, 1983, 1985) is the fact that the dichotomization of data should only be used with skewed data and not normally distributed data because it will accentuate differences. However, since the purpose of the dichotomization of data is only for sorting into a high and low group, it would appear to be acceptable for this purpose (MacCallun, et al, 2002. On the practice of dichotomization of quantitative variables, Psychological Methods, 7, 1, 19-40.).

2. These results would show an increase in cells B and C in Figure 1 which is undesirable; it should always be the case where A + D > B + C for key indicators to maintain their predictive validity.

2a. If a sample must be drawn, I can help to provide the guidance in pulling such a sample.

3. The distinction between making decisions with skewed (Licensing) as versus normally distributed (ERS) data is an important one because there is a greater likelihood with skewed data of introducing less than optimal programs into the high group when sorting programmatic data into high and low groups. This then makes it more difficult to identify the best programs. However, because of the distribution with skewed data the same cannot be said with the low group in which case it is relatively easy to identify the problem programs. This is not as much of a concern when the data are more normally distributed in which it is relatively easy to identify both the optimal and problem programs. This is an excellent example of the need of weighting of standards in order to increase the normal distribution of the data.
REFERENCES AND ADDITIONAL RELATED READINGS REGARDING DMLMA:


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Appendix

DIFFERENTIAL MONITORING LOGIC MODEL & ALGORITHM (DMLMA®) (Fiene, 2012): A 4th Generation ECPQIM – Early Childhood Program Quality Indicator Model

\[ \text{CI} \times \text{PQ} \Rightarrow \text{RA} + \text{KI} \Rightarrow \text{DM} + \text{PD} \Rightarrow \text{CO} \]

Definitions of Key Elements:

PC = Program Compliance/Licensing (Health and Safety) (Caring for Our Children)
PQ = QRIS/Accreditation/Caregiver/Child Interactions/Classroom Environment Quality (ERS/CLASS/PAS/BAS)
RA = Risk Assessment, (High Risk Rules) (Stepping Stones)
KI = Key Indicators (Predictor Rules) (13 Key Indicators of Quality Child Care)
DM = Differential Monitoring (How often to visit and what to review)
PD = Professional Development/Technical Assistance/Training (Not pictured but part of Model)
CO = Child Outcomes (Not pictured but part of Model)
Wisconsin Department of Children and Youth Services Program Monitoring Options Blueprint Report

Richard Fiene, Ph.D.

May 15, 2014

ABSTRACT

This report will provide a blueprint for consideration by Wisconsin’s Office of Children and Youth Services regarding options for their program monitoring system. The report will be organized into the following major headings: an introduction to program monitoring; how key indicators and risk assessment fit into the larger program monitoring of human services; how key indicators and risk assessment could be applied to Wisconsin’s system in particular; the technical aspects of differential monitoring, risk assessment and key indicator methodology, the sample to be drawn from the population, a timeline for this developmental effort; and potential cost savings from the approach. Many of the examples drawn are from the child care/early care and education field rather than the child welfare/child residential field because most of the best examples are occurring in child care and not child welfare at this point in time. Hopefully, with this blueprint is implemented in children and youth services, we can begin to change this fact.

INTRODUCTION

An effective and efficient program monitoring system is a goal of every state human service agency in the USA. This has been an issue in the human services for over the past half century as states grapple with increasing caseload sizes with shrinking resources. This report will provide an overview to the topic and several options that the State of Wisconsin can begin to explore related the program monitoring of children and youth services. The Risk Assessment, Key Indicator, and Differential Program Monitoring Methodologies were developed to help streamline the program monitoring of early care and education programs. It was first applied in child care licensing (Fiene & Nixon, 1985) but has been used in many other service types, such as: Head Start Performance Standards (Fiene, 2013a), National Accreditation (Fiene, 1996), and child and adult residential programs (Kroh & Melusky, 2010). The methodologies are based
upon statistical protocols that have been developed in the tests and measurements literature in which an abbreviated set of items is used to statistically predict as if the full test was applied. This methodology has been used in regulatory analysis and more recently has been proposed for use in Quality Rating and Improvement Systems (QRIS) (Fiene, 2013b). In reviewing the various states and the research literature, one state did not come to the surface with all the components in place for child welfare/child residential services, therefore a preponderance of examples drawn from the child care/early care and education field are used throughout the report. However, there are many similarities obviously from child care to child welfare with the most obvious being the protection of children and “to do no harm” as the ultimate outcome of services.

DIFFERENTIAL PROGRAM MONITORING

Risk Assessment and Key Indicators are important components of differential program monitoring which employs an abbreviated review rather than a comprehensive or full review of a program. It is one of several key elements that have been identified in the research literature to help improve the cost effectiveness and efficiency of the program monitoring of early care and education programs (Fiene, 2013b, c) (See the Appendix for two graphics that depict the key elements). A recent addition to differential monitoring are QRIS – Quality Rating and Improvement Systems. Key indicators have a long history of development within the licensing literature (Fiene & Kroh, 2000) but have not had a long history in child and adult residential services. This proposed blueprint is to assist Wisconsin to develop a fully functional differential program monitoring, risk assessment, and key indicator approach to their licensing system and then determine the cost and resources needed in implementing this approach.

The graphics in the Appendix depict the critical key elements of a differential program monitoring approach. In the first graphic program compliance/licensing is generally a state’s health and safety rules/regulations. The program quality key element for children and youth services would generally be represented by the national standards, such as the Child Welfare League of America’s Standards. The key indicator element is represented by the state’s statistical predictor rules/regulations drawn from their comprehensive set of rules/regulations. The last key element to be addressed in this report is the risk assessment key element in which these are the high risk rules/regulations that place children at greatest risk of mortality or morbidity. All these key elements will be addressed in this report in greater detail outlining the technical aspects of each. The second graphic in the Appendix – Graphic 2 depicts the relationship between licensing rules, compliance reviews, differential monitoring, abbreviated tools, risk assessment and key indicators. As one can see from this graphic it demonstrates the inter-relationships amongst all the program monitoring components.
KEY INDICATORS APPLIED TO WISCONSIN'S CHILDREN AND YOUTH LICENSING SYSTEM

Before beginning the description of each of the key elements it is important to note that there are some significant challenges because of the psychometric properties of licensing data such as the severe skewness and kurtosis present in state licensing data systems. These challenges will be addressed later in this blueprint in how to deal with skewness and kurtosis.

As a footnote, the risk assessment and key indicators can eventually be tied to the professional development/training/technical assistance system to link resources to specific needs of the programs. It also has the capability of tying them to specific child outcomes at some point in the future. This would be accomplished in the full implementation of the Differential Monitoring Logic Model and Algorithm (DMLMA©) as depicted in the Appendix – Graphic 1.

TECHNICAL ASPECTS OF THE KEY INDICATOR METHODOLOGY

This section provides the technical and statistical aspects of the key indicator methodology. It will provide the roadmap in taking the Wisconsin licensing data base through the necessary steps to generating the respective key indicators.

One of the first steps is to sort the data into high and low groups, generally the highest and lowest ratings can be used for this sorting. In very large states this is done on a sampling basis which will be described later in the blueprint. Frequency data will be obtained on those programs in the top level (usually top 20-25%) and the bottom level (usually the bottom 20-25%). The middle levels are not used for the purposes of these analyses. These two groups (top level & the bottom level) are then compared to how each program scored on each item within the specific assessment tool (see Figure 1). An example is provided in Figure 2 from a previous study conducted by the author (see Figure 2).

---

**Figure 1**

<table>
<thead>
<tr>
<th></th>
<th>Providers In Compliance or Top 25%</th>
<th>Programs Out Of Compliance or Bottom 25%</th>
<th>Row Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Highest level</strong>&lt;br&gt;(top 20-25%)</td>
<td>A</td>
<td>B</td>
<td>Y</td>
</tr>
<tr>
<td><strong>Lowest level</strong>&lt;br&gt;(bottom 20-25%)</td>
<td>C</td>
<td>D</td>
<td>Z</td>
</tr>
<tr>
<td><strong>Column Total</strong></td>
<td>W</td>
<td>X</td>
<td>Grand Total</td>
</tr>
</tbody>
</table>
Figure 2 depicts that all programs that were in the top 25% were also in the highest rating while the bottom 25% were also in the lowest rating. The data depicted in Figure 2 are taken from studies completed in Pennsylvania in 2002 (Fiene, etal) and 2006 (Barnard, Smith, Fiene & Swanson) in which their quality rating and improvement system, Keystone STARS, was validated. The reason for selecting this particular item from the ECERS – Early Childhood Environment Rating Scale is that it demonstrates a perfect phi coefficient in discriminating between the highest level and the lowest level. Most, if not all, of the licensing items that will attain the threshold levels to become key indicators will not approach this phi coefficient.

<table>
<thead>
<tr>
<th>Figure 2 – Pa. Study (Fiene, etal, 2002).</th>
<th>Providers In Compliance or Top 25%</th>
<th>Programs Out Of Compliance or Bottom 25%</th>
<th>Row Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Highest Star level in Pa.</td>
<td>117</td>
<td>0</td>
<td>117</td>
</tr>
<tr>
<td>Lowest Star level in Pa.</td>
<td>0</td>
<td>35</td>
<td>35</td>
</tr>
<tr>
<td>Column Total</td>
<td>117</td>
<td>35</td>
<td>152</td>
</tr>
</tbody>
</table>

Once the data are sorted in the above matrix, the following formula (Figure 3) is used to determine if Item 16 is a key indicator or not by calculating its respective Phi coefficient. Please refer back to Figure 1 for the actual placement within the cells and Figure 2 for the data within the cells. The legend (Figure 4) below the formula shows how the cells are defined.

**Figure 3 – Formula for Phi Coefficient**

\[ \phi = \frac{(A)(D)-(B)(C)}{\sqrt{(W)(X)(Y)(Z)}} \]

**Figure 4 – Legend for the Cells within the Phi Coefficient**

- **A** = High Group + Programs in Compliance on Specific Compliance Measure.
- **B** = High Group + Programs out of Compliance on Specific Compliance Measure.
- **C** = Low Group + Programs in Compliance on Specific Compliance Measure.
- **D** = Low Group + Programs out of Compliance on Specific Compliance Measure.
- **W** = Total Number of Programs in Compliance on Specific Compliance Measure.
- **X** = Total Number of Programs out of Compliance on Specific Compliance Measure.
- **Y** = Total Number of Programs in High Group.
- **Z** = Total Number of Programs in Low Group.
Once the data are run through the formula in Figure 3, the following chart (Figure 5) can be used to make the final determination of including or not including the item as a key indicator. Based upon the chart in Figure 5, it is best to have a Phi Coefficient approaching +1.00 if we are dealing with normally distributed data.

Continuing with the chart in Figure 5, if the Phi Coefficient is between +.25 and -.25, this indicates that the indicator is unpredictable in being able to predict overall compliance with the quality rating assessment tool. Either a false positive in which the indicator appears too often in the low group as being in compliance, or a false negative in which the indicator appears too often in the high group as being out of compliance. This can occur with Phi Coefficients above +.25 but it becomes unlikely as we approach +1.00 although there is always the possibility that other standards/rules/regulations could be found out of compliance (this was demonstrated in a study conducted by the author (Fiene, 2013c). Another solution is to increase the number of key indicators to be reviewed but this will cut down on the efficiency which is desirable and the purpose of the key indicators.

The last possible outcome with the Phi Coefficient is if it is between -.26 and -1.00, this indicates that the indicator is a terrible predictor because it is doing just the opposite of the decision we want to make. The indicator would predominantly be in compliance with the low group rather than the high group so it would be statistically predicting overall non-compliance. This is obviously something we do not want to occur.

**Figure 5 – Thresholds for the Phi Coefficient (Fiene & Nixon, 1983, 1985)**

<table>
<thead>
<tr>
<th>Phi Coefficient Range</th>
<th>Characteristic of Indicator</th>
<th>Decision</th>
</tr>
</thead>
<tbody>
<tr>
<td>(+1.00) – (+.26)</td>
<td>Good Predictor</td>
<td>Include</td>
</tr>
<tr>
<td>(.25) – (-.25)</td>
<td>Unpredictable</td>
<td>Do not Include</td>
</tr>
<tr>
<td>(-.26) – (-1.00)</td>
<td>Terrible Predictor</td>
<td>Do not Include</td>
</tr>
</tbody>
</table>

The key indicators should then only be used with those programs who have attained the highest rating. It is not intended for those programs that have attained lower ratings. However, even with those programs that have attained the highest rating, every 3-5 years a full, comprehensive review using the full set of rules/standards for licensing should occur (see Figure 6 for a graphical depiction). It is intended that a re-validation of the key indicators occur on a periodic basis to make certain that the key indicators have not changed because of differences in compliance history. This is an important and necessary step for the state to engage in to
ascertain the overall validity and reliability of the assessment system. Also there should not have been any major changes in the program while the key indicators are being administered, such as the director/administrator leaving or a large percentage of staff leaving or caseloads increasing significantly, or a change in the licensing status of the program.

**Figure 6 - Proposed DMLMA System with Key Indicators (KI)**

*Use of Wisconsin Key Indicators (WKI) for Licensing with a Full Review every 4th Year*

![Diagram of proposed DMLMA system with key indicators](image)

**TECHNICAL ASPECTS OF THE RISK ASSESSMENT METHODOLOGY**

The risk assessment methodology is very different from the key indicator methodology in that compliance history data are not utilized but rather a best practice ranking according to risk is used to determine which rules become core rules which have the greatest likelihood to place children at significant risk of morbidity or mortality. This is done by having a group of experts rank order all the rules on a Likert Scale from low risk to high risk of mortality or morbidity that non-compliance with the rule places children at. This is generally done on a 1-10 scale with 1 = low risk; 5 = medium risk; and 10 = high risk (see Figure 6A). The experts selected include but are not limited to licensing staff, policy makers, researchers, providers, advocacy groups, parents, and other significant stakeholders who will be impacted by the weighting of the rules.

**Figure 6A – Example of a Likert Scale for Measuring Risk to Children**

<table>
<thead>
<tr>
<th>Low Risk</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
</tr>
</thead>
</table>

Once the data are collected from all the experts, it is averaged for each rule to determine its relative rank in comparison to all the other rules. A significantly high threshold or cut off point is determined so that no more than 5-10% of the rules become core rules. These core rules can then be used in a differential monitoring approach (to be described more fully in the next section) and/or with the key indicators to complete abbreviated reviews of child welfare programs. It is recommended that such a practice of using both core rules and key indicators be used together.
because than the state has the benefits of both methodologies in measuring risk and being able to statistically predict overall compliance with a very short list of rules.

TECHNICAL ASPECTS DIFFERENTIAL MONITORING METHODOLOGY

There are a couple of other key technical aspects that need to be in place for a differential monitoring system to work. The Differential Monitoring Logic Model and Algorithm (DMLMA©) \(^3\) (see the Appendix) is a 4th generational Early Childhood Program Quality Indicator Model \(^4\) (ECPQIM4©) in which the major monitoring systems in early care and education are integrated conceptually so that the overall early care and education system can be assessed and validated. With this new model, it is now possible to compare results obtained from licensing systems, quality assurance systems, risk assessment systems, key indicator systems, technical assistance, and child protection outcome systems. The various approaches to validation are interposed within this model and the specific expected correlational thresholds that should be observed amongst the key elements of the model are suggested (see Figure 6B).

Figure 6B – Inter-Correlational Threshold Matrix

<table>
<thead>
<tr>
<th></th>
<th>PQ</th>
<th>RA</th>
<th>KI</th>
<th>DM</th>
<th>PD</th>
<th>CO</th>
</tr>
</thead>
<tbody>
<tr>
<td>CI</td>
<td>0.3</td>
<td>0.5</td>
<td>0.7</td>
<td>0.5</td>
<td>0.5</td>
<td>0.3</td>
</tr>
<tr>
<td>PQ</td>
<td></td>
<td></td>
<td>0.3</td>
<td>0.3</td>
<td>0.3</td>
<td></td>
</tr>
<tr>
<td>RA</td>
<td></td>
<td></td>
<td>0.5</td>
<td>0.5</td>
<td>0.5</td>
<td>0.3</td>
</tr>
<tr>
<td>KI</td>
<td></td>
<td></td>
<td></td>
<td>0.5</td>
<td>0.5</td>
<td>0.3</td>
</tr>
<tr>
<td>DM</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.5</td>
<td></td>
</tr>
<tr>
<td>PD</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.3</td>
</tr>
</tbody>
</table>

Key Elements (see the Appendix): CI = state or federal standards, usually rules or regulations. PQ = CWLA Standards or a Quality Assurance System. RA = risk assessment tools/systems in
which only the most critical rules/standards are measured. 

KI = key indicators in which only predictor rules/standards are measured. 

DM = differential monitoring decision making in which it is determined if a program is in compliance or not and the number of visits/the number of rules/standards are ascertained from a scoring protocol. 

PD = technical assistance/training and/or professional development system which provides targeted assistance to the program based upon the DM results. 

CO = child outcomes which assesses how well the children are protected which is the ultimate goal of the system.

Once the above key elements are in place, it is then possible to look at the relationships amongst them to determine if the system is operating as it was intended. This is done through a validation of the overall system and assessing the inter-correlations (Table 6B) to determine that the DM system is improving the overall protection of the children it serves.

Wisconsin could use the following plan to implement the above approach:

STATE AGENCY PLAN (These Steps can be viewed as an overall plan as outlined in Zellman & Fiene (2012):

The first step in utilizing the DMLMA for a state is to take a close look at its Comprehensive Licensing Tool (CI) that it uses to collect violation data on all rules with all facilities in its respective state. If the state does not utilize a tool or checklist or does not review all violation data than it needs to consider these changes because the DMLMA is based upon an Instrument Based Program Monitoring System (IPM) which utilizes tools/checklists to collect data on all rules.

The second step for the state is to compare their state’s rules with the National Standards (such as the CWLA National Standards for Best Practices) to determine the overlap and coverage between the two. This is the first approach to validation which involves Standards review (Zellman & Fiene, 2012).

The third step for the state is to compare the results from the CI with the RA tools. This step is the second approach to validation which involves Measures (Zellman & Fiene, 2012). The correlation between CI and RA should be at the .50 level or higher (.50+) (see Figure 6B).

The fourth step is for the state to generate a Key Indicator (KI) tool from the CI data base. Please see Fiene & Nixon (1985) and Fiene & Kroh (2000) for a detailed explanation of the methodology for generating a KI tool. This step is also part of the second approach to validation which involves Measures. The correlation between the CI and KI should be very high (.70+) because the KI is a subset of predictor rules taken from the CI data base.

The fifth step for the state is to use the RA and KI tools together to determine overall compliance of facilities and how often and which rules will be monitored for future visits. This is the basic
component of a Differential Monitoring (DM) approach and continues the second approach to validation (Measures). Also, this step should drive decisions within the technical assistance/training/professional development (PD) system in what resources are allocated to a particular facility. It would be expected that moderate correlations (.50+) would be found amongst RA, KI, DM, and PD.

The sixth and final step for the state is to compare the results from the various monitoring tools (CI, PQ, RA, KI) with any child development outcome (CO) data they collect. This is a relatively new area and few, if any, states at this point have this capability on a large scale. This step is the fourth approach to validation which involves Outcomes (Zellman & Fiene, 2012). The correlations between CI, PQ, RA, KI and CO will be on the lower end (.30+) because there are so many other variables that impact the child other than child welfare services.

The last step is to present a logic model which depicts how a differential monitoring system could potentially be actually used in Wisconsin (see Figure 6C).

**Figure 6C – Logic Model for Compliance Decisions**

```
Compliance Decisions:

Core Indicators = Core Rules + Key Indicators – this becomes a screening tool to determine if a program receives an AV or FV visit.

Core Indicators (100%) = The next visit is an Abbreviated Visit. Every 3-4 years a Full Licensing Visit is conducted.

Core Indicators (not 100%) = The next visit is a Full Licensing Visit where all rules are reviewed.

Compliance = 96%+ with all rules which indicates substantial to full compliance with all rules and 100% with Core Indicators. The next visit is an Abbreviated Visit.

Non-compliance = less than 96% with all rules which indicates lower compliance with all rules. The next visit is a Full Visit Study.
```
SAMPLE

Generally a sample is drawn from the population of early care and education facilities in respective states. Wisconsin will not be any different because of the size of the overall child welfare program. A random sample will be selected that represents the state population of child welfare programs. This will be determined by the number of programs, how the programs are distributed throughout the state, the size of the programs, the type of programs, etc… This will need to be determined once the actual implementation of this blueprint report is started. The author of this report can assist Wisconsin staff in how best to select the sample of programs.

TIMELINE

As soon as all the Wisconsin child welfare/child residential programs have gone through their assessment phase, it will be possible to do the calculations to determine the Phi Coefficients and generate the key indicators. I am guessing that this should not take any longer than 1 year but could be completed in a much shorter period of time if the assessments on individual programs could be moved up (see Figure 7). The analytical phase should take no longer than a month with an additional month to write up the report. A face to face presentation of the analyses could be done after these two months.

The timeline presented in Figure 7 can be adjusted to the specific needs for the Wisconsin system. The timeline is based upon previous projects and the average time to generate risk assessment core rules and key indicators. Another consideration or task is the development of the policies and procedures to be developed and implemented regarding the use of key indicators. This was not specifically listed on the timeline because it is something that is generally developed throughout the project with feedback from all the stakeholders who will be impacted by the use of this new approach to assessment and monitoring.

Figure 7 - WISCONSIN DMLMA PROJECT TIMELINE

<table>
<thead>
<tr>
<th>TASK</th>
<th>MONTHS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Collect Data</td>
<td>M1-M3</td>
</tr>
<tr>
<td>Sort Data</td>
<td>M2-3</td>
</tr>
<tr>
<td>Run Analyses</td>
<td>M3-5</td>
</tr>
<tr>
<td>Generate KI/RA</td>
<td>M6</td>
</tr>
<tr>
<td>Train on KI/RA</td>
<td>M6-7</td>
</tr>
<tr>
<td>KI/RA Reliable</td>
<td>M7-9</td>
</tr>
<tr>
<td>Implementation</td>
<td>M10-12</td>
</tr>
</tbody>
</table>
Legend:

KI – Key Indicators
RA – Risk Assessment

Collect Data – identify participant programs via sampling for KI and the stakeholders for RA.
Sort Data – KI - the individual programs are sorted into high and low groups representing the top 25% and the bottom 25% of programs as they have scored on the respective rules/standards.
Run Analyses – KI - each individual item within each of the assessment tools for every program will be compared to the sorting process of the high and low groups. RA – aggregate data into means for each rule, rank order the rules.
Generate KI/RA – a 2 x 2 matrix is constructed and the key indicators (KI) are generated from this matrix through the use of a phi coefficient. A final report will be delivered to Wisconsin executive staff for both KI and RA core indicator rules.
Training on KI/RA – all staff who will be using the KI/RA will be trained on its use.
KI/RA Reliability – reliability will be established by having two staff go out together and administer the key indicators separately and comparing their results.
Implementation – once reliability has been established, full implementation will begin.

COST SAVINGS

Again based upon previous studies most recently completed in California in 2010 (http://www.myccl.ca.gov/res/docs/12022010HandoutStakeholderMeeting.pdf), time savings of 50% have been attained by using a key indicator or abbreviated tool in completing assessments. It only makes sense that if an assessment can be completed in one hour rather than 2 – 4 hours that a state will see time savings. It is being assumed that equivalent savings should also be the case with Wisconsin’s licensing system although this cannot be made certain until the new key indicator or abbreviated tool is actually used for a period of time. Once the new key indicators are used for several months, comparisons could be made to when the full assessments were done.

CONCLUSION, OPTIONS, AND RECOMMENDATIONS

This blueprint report has given the basic empirical parameters to develop a differential monitoring, risk assessment, and key indicator approach to Wisconsin’s Children and Youth Licensing system. By following this blueprint Wisconsin staff should be able to fully implement the approach. Wisconsin staff would also need to determine if they have the internal capability for the development of the key indicators or if there will be the need to outsource certain aspects of the development. This will be an important consideration as Wisconsin moves forward with this project. I have provided two options for your consideration in moving forward.

Option 1 – Development of System Internally:

This would require either information systems or research & evaluation staff to analyze the data, generate core key indicator rules, and training of staff. I could provide the necessary consulting services to help the staff work through the methodology. This would probably require at least one face to face meeting with regular monthly conference calls between myself and staff. Discussions of the formatting of data and the types of analyses would be discussed and
demonstrated. The overall cost to develop the system internally with NARA support would be approximately $100,000.

**Option 2 – Development of System Externally:**

In this option I could do all the methodological work demonstrating how I would need the data sent to me, the analytical work in generating core key indicator rules, a report detailing the methodology and results. The only thing that Wisconsin staff would need to do is get the data to me, all other aspects of what is delineated in the timeline in Figure 7 would be completed by me. This would probably require several face to face trips to explain the process, the results, and do training of staff. Once everything was in place, Wisconsin staff would have a fully implemented system. The overall cost to develop the system externally with NARA support would be approximately $300,000.

Whatever option is selected the following **recommendations** are provided if Wisconsin staff want to develop a program monitoring system based upon empirical data:

1) Wisconsin should move forward with enhancing their differential monitoring approach in order to institute potential cost savings and reallocation of resources based upon those cost savings.

2) Develop and implement a key indicator approach based upon the methodology described in this blueprint.

3) Develop and implement a risk assessment approach based upon the methodology described in this blueprint.

4) A staff caseload analysis should be completed based upon *NARA’s Licensing Workload Assessment* in order to determine the exact number of additional staff needed to fully implement a Differential Monitoring Approach.
Notes:

1. The reason for pointing out the need to have a higher Phi Coefficient than what has been reported previously (Fiene & Nixon, 1983, 1985) is the fact that the dichotomization of data should only be used with skewed data and not normally distributed data because it will accentuate differences. However, since the purpose of the dichotomization of data is only for sorting into a high and low group, it would appear to be acceptable for this purpose (MacCallum, et al., 2002. On the practice of dichotomization of quantitative variables, Psychological Methods, 7, 1, 19-40.).

2. These results would show an increase in cells B and C in Figure 1 which is undesirable; it should always be the case where A + D > B + C for key indicators to maintain their predictive validity. The distinction between making decisions with skewed (Licensing) as versus normally distributed (ERS) data is an important one because there is a greater likelihood with skewed data of introducing less than optimal programs into the high group when sorting programmatic data into high and low groups. This then makes it more difficult to identify the best programs. However, because of the distribution with skewed data the same cannot be said with the low group in which case it is relatively easy to identify the problem programs. This is not as much of a concern when the data are more normally distributed in which it is relatively easy to identify both the optimal and problem programs. This is an excellent example of the need of weighting of standards in order to increase the normal distribution of the data.

3. It is important to note that many of the examples are drawn from the child care research literature and not from the child welfare research literature. The reason for this is most of the empirical basis for the development of these methodologies was completed in child care over the past 40 years. It is important for the reader of this report to keep this in mind and to make the necessary translations to the child welfare literature research base. For example, when I describe the national health and safety standards in child care, the reader should be thinking of the CWLA national standards for the various child welfare service types. QRIS systems can translate to child welfare systems that locally have been built upon generic licensing systems. The DMLMA model is a generic model for all human services and not only for child care, so the reader should be able to make the translation from child care to child welfare.

4. There are two publications that are more pertinent to children & youth services and child welfare that I wrote back in the 1980’s the Wisconsin staff may be interested in (Fiene & McDonald, (1987), Instrument Based Program Monitoring and Indicator Checklist for Child Welfare, and Fiene (1981), Conceptual Framework for Program Monitoring).

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REFERENCES AND ADDITIONAL RELATED READINGS REGARDING DIFFERENTIAL MONITORING, RISK ASSESSMENT, AND KEY INDICATOR METHODOLOGIES:


Appendix – Graphic 1

DIFFERENTIAL MONITORING LOGIC MODEL & ALGORITHM (DMLMA®) (Fiene, 2012): A 4\textsuperscript{th} Generation ECPQIM – Early Childhood Program Quality Indicator Model

\[ CI \times PQ \Rightarrow RA + KI \Rightarrow DM + PD \Rightarrow CO \]

Definitions of Key Elements:

- **PC** = Program Compliance/Licensing (Health and Safety, Protections for Children)
- **PQ** = QRIS/Accreditation/Caregiver/Child Interactions
- **RA** = Risk Assessment, (High Risk Rules)
- **KI** = Key Indicators (Predictor Rules)
- **DM** = Differential Monitoring (How often to visit and what to review)
- **PD** = Professional Development/Technical Assistance/Training (Not pictured but part of Model)
- **CO** = Child Outcomes (Not pictured but part of Model)
Appendix – Graphic 2 - Licensing Rules, Compliance Reviews, Differential Monitoring, Abbreviated Tools, Risk Assessment, and Key Indicators

All Licensing Rules – Full Compliance Reviews

Differential Monitoring

How Often to Visit? What is Reviewed?

Frequency

More Often Less Often

Abbreviated Tool

Risk Assessment Weights Key Indicators Predictors
These are the results from the key indicator analyses performed on the randomly selected 400 group child care home providers who comply with the 416 Rules for announced Renewal Inspections and 400 group child care home providers who had unannounced Monitoring inspections completed. Specific reference and documentation for the key indicator analyses and methodology can be found in Appendix 1.

As with all early care and education (ECE) licensing quality assurance data sets the data from the above two groups is highly skewed which means that the majority of programs are in full compliance (100%) with all the group child care home rules/regulations. In the sample drawn for the Renewal Inspections, 64% of the programs were in full compliance while for the Monitoring Inspections, 87% of the programs were in full compliance. See Appendix 2.

Table 1 contains the specific key indicators from the Renewal Inspections while Table 2 contains the specific key indicators from the Monitoring Inspections.

**Table 1 - Renewal Inspections**

<table>
<thead>
<tr>
<th>Rule Number</th>
<th>Content</th>
<th>Phi</th>
</tr>
</thead>
<tbody>
<tr>
<td>416.5.L.3</td>
<td>Vaccine for pets</td>
<td>.29</td>
</tr>
<tr>
<td>416.5.A</td>
<td>Hazard free</td>
<td>.26</td>
</tr>
<tr>
<td>416.7.L</td>
<td>Sleeping and napping arrangements</td>
<td>.42</td>
</tr>
<tr>
<td>416.11.A.3</td>
<td>Child Immunizations</td>
<td>.27</td>
</tr>
<tr>
<td>416.11.H.1.I</td>
<td>Parent consent for emergency medical treatment</td>
<td>.25</td>
</tr>
<tr>
<td>416.12.O</td>
<td>Infant formula</td>
<td>.27</td>
</tr>
<tr>
<td>416.12.Q</td>
<td>Bottles labeled</td>
<td>.25</td>
</tr>
<tr>
<td>416.15.C.3</td>
<td>Emergency contact information</td>
<td>.35</td>
</tr>
<tr>
<td>416.15.C.4</td>
<td>Adults who have permission to pick up child</td>
<td>.38</td>
</tr>
<tr>
<td>416.15.C.6</td>
<td>Daily record of illnesses, injury, indicators of abuse</td>
<td>.33</td>
</tr>
</tbody>
</table>

These above 10 rules statistically predict overall compliance with all the rules. They represent about 4% of the total number of rules.
Monitoring Inspections

These are the results from the key indicator analyses performed on the randomly selected 400 group child care home providers who comply with the 416 Rules for unannounced Monitoring Inspections.

Table 2 - Monitoring Inspections

<table>
<thead>
<tr>
<th>Rule Number</th>
<th>Content</th>
<th>Phi</th>
</tr>
</thead>
<tbody>
<tr>
<td>416.4.H.4</td>
<td>Paths of egress free of obstacles</td>
<td>.28</td>
</tr>
<tr>
<td>416.5.J</td>
<td>Toxic items are inaccessible</td>
<td>.31</td>
</tr>
<tr>
<td>416.8.A</td>
<td>Supervision at all times</td>
<td>.44</td>
</tr>
<tr>
<td>416.8.E</td>
<td>Approved primary caregiver present</td>
<td>.35</td>
</tr>
<tr>
<td>416.8.J.1</td>
<td>Adult child ratio for preschoolers &amp; school age</td>
<td>.28</td>
</tr>
<tr>
<td>416.8.J.2</td>
<td>Two caregivers present when 6+children</td>
<td>.34</td>
</tr>
<tr>
<td>416.8.J.3</td>
<td>Adult child ratio for infant &amp; toddlers</td>
<td>.33</td>
</tr>
<tr>
<td>416.14.M</td>
<td>First aid and CPR</td>
<td>.52</td>
</tr>
<tr>
<td>416.15.B.12</td>
<td>Any changes to the home reported</td>
<td>.29</td>
</tr>
<tr>
<td>416.15.B.20</td>
<td>Supervision by approved primary caregiver</td>
<td>.38</td>
</tr>
</tbody>
</table>

These above 10 rules statistically predict overall compliance with all the monitoring rules. These 10 rules represent 77% of the total monitoring rules reviewed on any inspection. These results support the use of unannounced monitoring inspections as a very effective and efficient means of assuring an overall quality assurance in the licensing system.

However, it is not recommended that only these monitoring predictive rules be used, the State of New York should consider using the Monitoring Inspection Protocol along with the newly generated key indicators from the Renewal Inspection analyses as delineated in Table 1. The data from Table 1 were generated from full licensing inspections where all the rules were reviewed. By using both sets of key indicators, the state will balance the predictive and risk assessment aspects in their quality assurance licensing system.

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Appendix 1: TECHNICAL ASPECTS OF THE KEY INDICATOR METHODOLOGY

This section provides the technical and statistical aspects of the key indicator methodology. One of the first steps is to sort the data into high and low groups, generally the highest and lowest ratings can be used for this sorting. Frequency data will be obtained on those programs in the top level (usually top 20-25%) and the bottom level (usually the bottom 20-25%). The middle levels are not used for the purposes of these analyses. These two groups (top level & the bottom level) are then compared to how each program scored on each child care rule (see Figure 1).

<table>
<thead>
<tr>
<th>Figure 1</th>
<th>Providers In Compliance on Rule</th>
<th>Programs Out Of Compliance on Rule</th>
<th>Row Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Highest level (top 20-25%)</td>
<td>A</td>
<td>B</td>
<td>Y</td>
</tr>
<tr>
<td>Lowest level (bottom 20-25%)</td>
<td>C</td>
<td>D</td>
<td>Z</td>
</tr>
<tr>
<td>Column Total</td>
<td>W</td>
<td>X</td>
<td>Grand Total</td>
</tr>
</tbody>
</table>

Once the data are sorted in the above matrix, the following formula (Figure 2) is used to determine if the rule is a key indicator or not by calculating its respective Phi coefficient. Please refer back to Figure 1 for the actual placement within the cells. The legend (Figure 3) below the formula shows how the cells are defined.

Figure 2 – Formula for Phi Coefficient

\[ \phi = \frac{(A)(D)-(B)(C)}{\sqrt{(W)(X)(Y)(Z)}} \]

Figure 3 – Legend for the Cells within the Phi Coefficient

- **A =** High Group + Programs in Compliance on Specific Rule.
- **B =** High Group + Programs out of Compliance on Specific Rule.
- **C =** Low Group + Programs in Compliance on Specific Rule.
- **D =** Low Group + Programs out of Compliance on Specific Rule.
- **W =** Total Number of Programs in Compliance on Specific Rule.
- **X =** Total Number of Programs out of Compliance on Specific Rule.
- **Y =** Total Number of Programs in High Group.
- **Z =** Total Number of Programs in Low Group.
Once the data are run through the formula in Figure 2, the following chart (Figure 4) can be used to make the final determination of including or not including the rule as a key indicator. Based upon the chart in Figure 4, it is best to have a Phi Coefficient approaching +1.00 however that is rarely attained with licensing data but has occurred in more normally distributed data.

Continuing with the chart in Figure 4, if the Phi Coefficient is between +.25 and -.25, this indicates that the indicator rule is unpredictable in being able to predict overall compliance with the full set of rules. Either a false positive in which the indicator appears too often in the low group as being in compliance, or a false negative in which the indicator appears too often in the high group as being out of compliance. This can occur with Phi Coefficients above +.25 but it becomes unlikely as we approach +1.00 although there is always the possibility that other rules could be found out of compliance. Another solution is to increase the number of key indicator rules to be reviewed but this will cut down on the efficiency which is desirable and the purpose of the key indicators.

The last possible outcome with the Phi Coefficient is if it is between -.26 and -1.00, this indicates that the indicator is a terrible predictor because it is doing just the opposite of the decision we want to make. The indicator rule would predominantly be in compliance with the low group rather than the high group so it would be statistically predicting overall non-compliance. This is obviously something we do not want to occur.

**Figure 4 – Thresholds for the Phi Coefficient**

<table>
<thead>
<tr>
<th>Phi Coefficient Range</th>
<th>Characteristic of Indicator</th>
<th>Decision</th>
</tr>
</thead>
<tbody>
<tr>
<td>(+1.00) – (+.26)</td>
<td>Good Predictor</td>
<td>Include</td>
</tr>
<tr>
<td>(+.25) – (-.25)</td>
<td>Unpredictable</td>
<td>Do not Include</td>
</tr>
<tr>
<td>(-.26) – (-1.00)</td>
<td>Terrible Predictor</td>
<td>Do not Include</td>
</tr>
</tbody>
</table>
APPENDIX 2

Figure 5 – Bar Chart of Renewal Inspections Compliance Levels (Number of Violations)
Figure 6 – Bar Chart of Monitoring Inspections Compliance Levels (Number of Violations)
Figure 7 – Line Chart of Renewal Inspections Compliance Levels (Number of Violations)
Figure 8 – Line Chart of Monitoring Inspections Compliance Levels (Number of Violations)
These are the results from the key indicator analyses performed on the full data base of group child care homes (N = 1399) with the 416 Rules for announced Renewal Inspections. Usually these types of analyses are performed using a sample of data, such as 200 – 400 programs. The specific statistics used are most sensitive with a sample size within this range. Therefore, utilizing the full data set with well over 1000 programs is a new use of the Key Indicator methodology. The methodology and the results are still a very efficient way to reduce the full set of rules to a statistically predictive set of rules but there are some cautions which are pointed out throughout this brief report.

Some cautions noted are the following: 1) With the increased number of programs, the number of rules attaining the phi coefficient increases because the p-values decreased very significantly making many more rules statistically significant well below the .25 threshold. This is an expected result; however, the original decision table of maintaining the .25 threshold was used. 2) Whenever substantial compliance is introduced into the high group which was the case in two of the four analytical frameworks, it potentially increases the possibility that a specific key indicator rule could be out of compliance when the key indicators are used.

These analyses were unique in that the full data set was used which provided enhancements to the Key Indicator Methodology. In Table 1 below, the various results are provided demonstrating the differences amongst the various analytical frameworks. Four frameworks were used in constructing the analytical matrix for generating the Key Indicators: 1) (100/99) The high compliance group was defined as 100% in compliance (no violations) while the low compliance group was defined as 1 or more violations, 2) (99/95) The high compliance group was defined as 1 violation while the low compliance group was defined as 5 or more violations, 3) (100/95) The high compliance group was defined as 100% in compliance (no violations) while the low compliance group was defined as 5 or more violations, and 4) (100-99/95) The high compliance group was defined as 0-1 violations while the low compliance group was defined as 5 or more violations.
### Table 1 – Four Frameworks for Generating Key Indicators for Group Child Care Homes (416 Rules)

<table>
<thead>
<tr>
<th>Rule</th>
<th>100/99</th>
<th>99/95</th>
<th>100/95</th>
<th>100-99/95</th>
<th>TOTAL</th>
<th>Content</th>
</tr>
</thead>
<tbody>
<tr>
<td>3H</td>
<td>------</td>
<td>------</td>
<td>.33</td>
<td>.27</td>
<td>2</td>
<td>no peeling paint</td>
</tr>
<tr>
<td>4B1</td>
<td>------</td>
<td>------</td>
<td>.31</td>
<td>.25</td>
<td>2</td>
<td>evacuation drills</td>
</tr>
<tr>
<td>5A</td>
<td>------</td>
<td>------</td>
<td>.42</td>
<td>.33</td>
<td>2</td>
<td>hazard free</td>
</tr>
<tr>
<td>5J</td>
<td>------</td>
<td>------</td>
<td>.27</td>
<td></td>
<td>1</td>
<td>danger items inaccess</td>
</tr>
<tr>
<td>5L2</td>
<td>------</td>
<td>------</td>
<td>.30</td>
<td>.26</td>
<td>2</td>
<td>pets licensed</td>
</tr>
<tr>
<td>L3</td>
<td>------</td>
<td>------</td>
<td>.27</td>
<td>.32</td>
<td>3</td>
<td>pet vaccines</td>
</tr>
<tr>
<td>5N5</td>
<td>------</td>
<td>------</td>
<td>.25</td>
<td></td>
<td>1</td>
<td>outdoor surface</td>
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<tr>
<td>5R</td>
<td>------</td>
<td>------</td>
<td>.25</td>
<td>.25</td>
<td>2</td>
<td>flashlight</td>
</tr>
<tr>
<td>5V</td>
<td>------</td>
<td>------</td>
<td>.30</td>
<td>.29</td>
<td>2</td>
<td>carbon monoxide alarm</td>
</tr>
<tr>
<td>6L</td>
<td>------</td>
<td>------</td>
<td>.26</td>
<td></td>
<td>1</td>
<td>transportation schedule</td>
</tr>
<tr>
<td>7L</td>
<td>.31</td>
<td>.50</td>
<td>.61</td>
<td>.57</td>
<td>4</td>
<td>sleeping arrangements</td>
</tr>
<tr>
<td>8A</td>
<td>------</td>
<td>------</td>
<td>.32</td>
<td>.38</td>
<td>3</td>
<td>supervision</td>
</tr>
<tr>
<td>8E</td>
<td>------</td>
<td>------</td>
<td>.37</td>
<td></td>
<td>2</td>
<td>primary caregiver</td>
</tr>
<tr>
<td>8F</td>
<td>------</td>
<td>------</td>
<td>.26</td>
<td>.30</td>
<td>3</td>
<td>assistant present</td>
</tr>
<tr>
<td>8J2</td>
<td>------</td>
<td>------</td>
<td>.26</td>
<td></td>
<td>1</td>
<td>2 caregivers present</td>
</tr>
<tr>
<td>8J3</td>
<td>------</td>
<td>------</td>
<td>.31</td>
<td>.35</td>
<td>3</td>
<td>one caregiver</td>
</tr>
<tr>
<td>11B1ii</td>
<td>------</td>
<td>------</td>
<td>.27</td>
<td></td>
<td>1</td>
<td>med statement</td>
</tr>
<tr>
<td>11c1</td>
<td>------</td>
<td>------</td>
<td>.26</td>
<td></td>
<td>1</td>
<td>health care plan</td>
</tr>
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<td>11c2i</td>
<td>------</td>
<td>------</td>
<td>.31</td>
<td>.28</td>
<td>2</td>
<td>health checks</td>
</tr>
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<td>11H1i</td>
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<td>------</td>
<td>.30</td>
<td>.43</td>
<td>3</td>
<td>emergency medical</td>
</tr>
<tr>
<td>12N</td>
<td>------</td>
<td>------</td>
<td>.30</td>
<td>.42</td>
<td>3</td>
<td>parent agree feeding</td>
</tr>
<tr>
<td>12O</td>
<td>------</td>
<td>------</td>
<td>.28</td>
<td>.28</td>
<td>2</td>
<td>parent agree formula</td>
</tr>
<tr>
<td>13C</td>
<td>------</td>
<td>------</td>
<td>.34</td>
<td>.26</td>
<td>2</td>
<td>caregivers &amp; SEL</td>
</tr>
<tr>
<td>14F</td>
<td>------</td>
<td>------</td>
<td>.33</td>
<td></td>
<td>1</td>
<td>30 hrs training</td>
</tr>
<tr>
<td>14M</td>
<td>.32</td>
<td>------</td>
<td>.49</td>
<td>.32</td>
<td>3</td>
<td>cert in FA/CPR</td>
</tr>
<tr>
<td>15A9</td>
<td>------</td>
<td>------</td>
<td>.25</td>
<td></td>
<td>1</td>
<td>licensed capacity</td>
</tr>
<tr>
<td>15B12</td>
<td>------</td>
<td>------</td>
<td>.26</td>
<td></td>
<td>1</td>
<td>notified of any change</td>
</tr>
<tr>
<td>15B22</td>
<td>------</td>
<td>------</td>
<td>.28</td>
<td>.26</td>
<td>2</td>
<td>written policies</td>
</tr>
<tr>
<td>15C3</td>
<td>------</td>
<td>------</td>
<td>.44</td>
<td>.54</td>
<td>3</td>
<td>emergency contact</td>
</tr>
<tr>
<td>15C4</td>
<td>.27</td>
<td>------</td>
<td>.47</td>
<td>.59</td>
<td>4</td>
<td>pickup child</td>
</tr>
<tr>
<td>15C5</td>
<td>------</td>
<td>------</td>
<td>.34</td>
<td>.43</td>
<td>3</td>
<td>daily attendance</td>
</tr>
<tr>
<td>15C6</td>
<td>.41</td>
<td>------</td>
<td>.38</td>
<td>.67</td>
<td>4</td>
<td>health record</td>
</tr>
<tr>
<td>15C13</td>
<td>.25</td>
<td>------</td>
<td>.29</td>
<td>.49</td>
<td>4</td>
<td>arrival departure</td>
</tr>
</tbody>
</table>

**TOTAL**: 5, 12, 33, 24
These four frameworks provide guidance in determining the best combination of Key Indicators given the various compliance determinations, such as 100% compliance versus substantial but not full compliance with all the group child care home rules. In reviewing the frameworks, clearly the 100/99 option #1 where the high group is 100% in compliance with no violations is too stringent a criteria since so few rules make the cut for the Key Indicator threshold. The second option (99/95) where the high group has only 1 violation is a better option because it introduces additional Key Indicators. This option was completed by both the author and staff at NY/OCFS. The third option (100/95) where the high group is 100% in compliance with no violations but where the low group has 5 or more violations provides a much larger number of Key Indicators. This option really is less efficient (usually key indicator tools represent 10% or less of the full set of rules) by providing over 30 Key Indicators but it could be a good resource to add other Key Indicators randomly. The last option (100-99/95) where the high group has either no violations or 1 violation provides a nice balance with the number of Key Indicators generated. This option gets closer to the 10% ratio of Key Indicators to the full set of rules.

Based upon the results from Table 1, a recommendation could be made to use those Key Indicators that appear the most often in the four options. That would appear to be the best balanced approach. However, one must look at the licensing law to make certain that even this approach is a valid policy to pursue. For example, if the licensing law requires 100% full compliance with all rules, then this approach may not be the best policy decision. Selecting one of the 100% full compliance frameworks may be the better choice. However, if the state has discretion in issuing licenses on the basis of substantial but not full compliance than any of the frameworks will be ok or a combination of any of the four would also be a good policy decision.

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Qualistar Rating Key Indicator Study

Richard Fiene, Ph.D.

June 17, 2014

ABSTRACT

This report provides an analysis of Colorado’s quality rating system, the Qualistar Rating, for generating key indicators. Key indicators have been used a great deal in the licensing literature but this is a first time analysis in utilizing this methodology in a QRS (Quality Rating System) or a QRIS (Quality Rating and Improvement System). The key indicator methodology is described in detail applying it to QRS/QRIS. The results clearly indicate that the strongest key indicators are within the Family Partnerships component of the Qualistar Rating; however there are some major limitations to utilizing this methodology with QRS/QRIS.

INTRODUCTION

The Qualistar Rating, administered by Qualistar Colorado, is one of the longest continuously running QRS in the United States. Presently over 50% of states have QRS/QRIS and the research on these program quality rating & improvement systems has increased over the years. One area of research that has been gaining momentum most recently is ascertaining the most effective and efficient delivery system for a QRS/QRIS as the number of early care and education programs participating in QRS/QRIS continues to increase. This report provides an overview to the topic and introduces an option that has been used in the human services/child care licensing field in identifying key indicators of overall compliance with standards. The purpose of the key indicator methodology is to focus monitoring visits on those standards that have the ability to predict overall compliance with the full set of QRS/QRIS standards. The key indicator methodology is part of a program monitoring approach called Differential Program Monitoring which was developed to help streamline the program monitoring of early care and education programs (please see the Appendix for two graphics which help to depict this relationship (Figures 8/9). It was first applied in child care licensing (Fiene & Nixon, 1985) but has been used in many other service types, such as: Head Start Performance Standards (Fiene,
2013a), National Accreditation (Fiene, 1996), and child and adult residential programs (Kroh & Melusky, 2010). The methodologies are based upon statistical protocols that have been developed in the tests and measurements literature in which an abbreviated set of items is used to statistically predict as if the full test was applied. This methodology has been used in regulatory analysis and is now being proposed for use in Quality Rating and Improvement Systems (Fiene, 2013b). This study and report is the first demonstration of its use with QRS.

TECHNICAL ASPECTS OF THE KEY INDICATOR METHODOLOGY

This section provides the technical and statistical aspects of the key indicator methodology. It will provide the specific methodology for generating the key indicators for the Qualistar Rating.

One of the first steps is to sort the data into high and low groups, generally the highest and lowest ratings can be used for this sorting. In very large states such as Colorado this is done on a sampling basis. Frequency data will be obtained on those programs in the top level (usually top 20-25%) and the bottom level (usually the bottom 20-25%). The middle levels are not used for the purposes of these analyses. These two groups (top level & the bottom level) are then compared to how each program scored on each item within the specific assessment tool (see Figure 1). An example from the Qualistar Rating database is provided in Figure 2 (see Figure 2).

<table>
<thead>
<tr>
<th>Figure 1</th>
<th>Providers In Compliance or Top 25%</th>
<th>Programs Out Of Compliance or Bottom 25%</th>
<th>Row Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Highest level (top 20-25%)</td>
<td>A</td>
<td>B</td>
<td>Y</td>
</tr>
<tr>
<td>Lowest level (bottom 20-25%)</td>
<td>C</td>
<td>D</td>
<td>Z</td>
</tr>
<tr>
<td>Column Total</td>
<td>W</td>
<td>X</td>
<td>Grand Total</td>
</tr>
</tbody>
</table>

Because of the differences in the data distribution for the Qualistar Rating, the above cutoff points had to be more stringent with the respective cutoff points for the high and low groups because the majority of the programs were at the Star 2 and 3 levels. In comparing these data to past licensing distributions (see Fiene, 2013d), it would be expected that the majority of programs would be at a Star 1 level, but that was not the case with this sample. Rather than using a 20-25% cut off point, it was changed to 10% to accommodate this difference. Figure 2 depicts that all programs that were in the top 10% were in the highest rating while the bottom 10% were in the lowest rating. The data depicted in Figure 2 are taken from the Family
Engagement Standard 5 – The program provides opportunities for staff and families to get to know one another. The reason for selecting this particular standard is that it demonstrates a perfect Phi Coefficient in discriminating between the highest level and the lowest level\(^1\).

<table>
<thead>
<tr>
<th>Figure 2: Criterion 5 Family Partnerships</th>
<th>Providers In Compliance or Top 10(^1)%</th>
<th>Programs Out Of Compliance or Bottom 10%</th>
<th>Row Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Highest Star level</td>
<td>11</td>
<td>0</td>
<td>11</td>
</tr>
<tr>
<td>Lowest Star level</td>
<td>0</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>Column Total</td>
<td>11</td>
<td>10</td>
<td>21</td>
</tr>
</tbody>
</table>

Once the data are sorted in the above matrix, the following formula (Figure 3) is used to determine if the standard is a key indicator or not by calculating its respective Phi Coefficient. Please refer back to Figure 1 for the actual placement within the cells and Figure 2 for the data within the cells. The legend (Figure 4) below the formula shows how the cells are defined.

Figure 3 – Formula for Phi Coefficient

\[
\phi = \frac{(A)(D)-(B)(C)}{\sqrt{(W)(X)(Y)(Z)}}
\]

Figure 4 – Legend for the Cells within the Phi Coefficient

- \(A\) = High Group + Programs in Compliance on Specific Compliance Measure.
- \(B\) = High Group + Programs out of Compliance on Specific Compliance Measure.
- \(C\) = Low Group + Programs in Compliance on Specific Compliance Measure.
- \(D\) = Low Group + Programs out of Compliance on Specific Compliance Measure.
- \(W\) = Total Number of Programs in Compliance on Specific Compliance Measure.
- \(X\) = Total Number of Programs out of Compliance on Specific Compliance Measure.
- \(Y\) = Total Number of Programs in High Group.
- \(Z\) = Total Number of Programs in Low Group.

Once the data are run through the formula in Figure 3, the following chart (Figure 5) can be used to make the final determination of including or not including the item as a key indicator. Based
upon the chart in Figure 5, it is best to have a Phi Coefficient approaching +1.00 since the data are more normally distributed\(^2\) than is the case with licensing data.

Continuing with the chart in Figure 5, a Phi Coefficient between +.75 and -.25 indicates that the indicator is unpredictable in being able to predict overall compliance with the quality rating assessment tool. Either a false positive in which the indicator appears too often in the low group as being in compliance, or a false negative in which the indicator appears too often in the high group as being out of compliance\(^3\). This can occur with Phi Coefficients above +.75 but it becomes unlikely as they approach +1.00, although there is always the possibility that other standards/rules/regulations could be found to be out of compliance (this was demonstrated in a study conducted by the author (Fiene, 2013c). Another solution is to increase the number of key indicators to be reviewed but this will cut down on the efficiency which is desirable and the purpose of the key indicators.

The last possible outcome with the Phi Coefficient is if it is between -.26 and -1.00, this indicates that the indicator is a terrible predictor because it is doing just the opposite of the desired. The indicator would predominantly be in compliance with the low group rather than the high group so it would be statistically predicting overall non-compliance. This is obviously undesirable.

**Figure 5 – Thresholds for the Phi Coefficient (Fiene & Nixon, 1983, 1985)(Fiene, 2014)**

<table>
<thead>
<tr>
<th>Phi Coefficient Range</th>
<th>Characteristic of Indicator</th>
<th>Decision</th>
</tr>
</thead>
<tbody>
<tr>
<td>(+1.00) – (+.76)</td>
<td>Good Predictor</td>
<td>Include</td>
</tr>
<tr>
<td>(+.75) – (-.25)</td>
<td>Unpredictable</td>
<td>Do not Include</td>
</tr>
<tr>
<td>(-.26) – (-1.00)</td>
<td>Terrible Predictor</td>
<td>Do not Include</td>
</tr>
</tbody>
</table>

The key indicators should then only be used with those programs that have attained the highest rating. It is not intended for those programs that have attained lower ratings. However, even with those programs that have attained the highest rating, periodically a full, comprehensive review using the full set of standards for Qualistar Colorado should occur (see Figure 6 for a graphical depiction). It is intended that a re-validation of the key indicators occur on a periodic basis to make certain that the key indicators have not changed because of differences in compliance with standards history. This is an important and necessary step for the program to engage in to ascertain the overall validity and reliability of the assessment system. Also there should not have been any major changes in the program while the key indicators are being administered, such as the director leaving or a large percentage of teachers leaving or enrollment increasing significantly, or a change in the licensing or accreditation status of the program.
RESULTS

The results reported in this section are based upon a sample selected from the overall Qualistar Rating database from its most recent monitoring reviews (N = 117). This was a representative sample of the program’s QRS.

There are five components of the Qualistar Rating: Learning Environment, Family Partnerships, Training and Education, Adult to Child Ratios and Group Size, and Accreditation. See Figures 10-14 in the Appendix for the graphical depictions of the data distributions for the five major criteria. The data distributions are provided because a pre-requisite for calculating the key indicator Phi Coefficients is the dichotomization of data with a skewed data distribution. Figures 10-14 display how much the data are skewed.

The Qualistar Rating is a zero-to-4 star system, with 4 stars indicating the highest level of quality⁴. Eleven programs were rated at the Star 1 level, 19 programs were rated at the Star 2 level, 77 programs were rated at the Star 3 level, and 10 programs were rated at the Star 4 level for a total of 117 programs included in these analyses. There were no programs in the sample that earned less than one star.

Based upon the key indicator methodology described in the previous section, the only Qualistar Rating standards that reached key indicator designation⁵ were the following: Family Partnership Standard/Criterion 5 = The program provides opportunities for staff and families to get to know one another; Family Partnership Standard/Criterion 7 = Families receive information on their child’s progress on a regular basis, using a formal mechanism such as a report or parent conference and Family Partnership Standard/Criterion 8 = Families are included in planning and decision making for the program.
Figure 7 – Key Indicators with Phi Coefficients

<table>
<thead>
<tr>
<th>Family Partnership Standard/Criterion</th>
<th>Phi</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>1.00</td>
<td>.001</td>
</tr>
<tr>
<td>7</td>
<td>0.86</td>
<td>.001</td>
</tr>
<tr>
<td>8</td>
<td>0.83</td>
<td>.001</td>
</tr>
</tbody>
</table>

There were many other significant correlations (Family Partnerships and Adult-to-Child Ratios and Group Sizes) obtained but none reached the cutoff threshold of .76+ for the Phi calculations. These other correlations are reported in the Appendix after the descriptive graphical displays in Figures 15, 15a, 15b. The Phi Coefficients for the other Criteria (Learning Environment, Training and Education, and Program Accreditation) were not calculated because the data distributions were not skewed as was the case with Family Partnerships and Adult-to-Child Ratios and Group Sizes (see Figures 10-14).

LIMITATIONS

There are two major limitations to this study, 1) the first deals with the statistics being used to generate the key indicators; 2) the second deals with the key indicator methodology.

The first limitation has to do with dichotomization of data which should only be used with very skewed data. Data skewness always occurs with licensing data because of the nature of the data, health and safety protections (the majority of programs are always in compliance with the respective rules). However, this appears to not always be the case with QRS/QRIS data which deals with more program quality aspects of facilities and shows greater variation in the data. If this is the case then dichotomization of data is not appropriate and should not be utilized in order to generate key indicators.

The second limitation of this study is if the key indicator methodology and differential monitoring approaches are appropriate for QRS/QRIS. In Figure 6 above and in the conclusion to this report below, there is a scenario where it can be used but Qualistar Colorado and each state must determine if this is an appropriate approach for their respective program. For example, key indicators will not work in a block model and with a point-system model may generate very limited time savings if the data distribution is normally distributed and there are very few programs at the highest star level. In licensing data base distributions there is always a large number of programs to select from in the highest compliance levels (usually a minimum of 25%).
CONCLUSION/FUTURE RESEARCH/DISCUSSION/RECOMMENDATIONS

This study is the first of its kind in generating key indicators for a QRS based upon the analyses performed with the Qualistar Rating data base. It potentially demonstrates that the use of the key indicator methodology with QRS/QRIS could be feasible and warranted in order to focus limited program monitoring resources in a most efficient and effective manner keeping the above stated limitations in mind as stated in the previous Limitations Section. In the future, Qualistar Colorado may want to pilot an approach utilizing a small group of programs and could focus resources on the Family Partnership/Engagement standards on an ongoing basis between comprehensive reviews as depicted in Figure 6 above for Star 4 programs. The time saved here could then be redistributed to spending more time with the Star 1 programs.

It will be timely to see other states and programs who are interested in generating key indicators if they have Family Partnership/Engagement standards as part of their respective QRS/QRIS to determine if these standards reach the same threshold for key indicator designation as has occurred in this study. It will also be interesting to see if any other state’s criteria/standards data distributions are similar to what has been found in the Qualistar Rating or not.

However, as highlighted in the Limitations Section, states and programs need to consider if the key indicator methodology and the resultant differential monitoring model is really warranted and appropriate for their respective QRS/QRIS’s. As has been the case with Colorado’s Qualistar Rating, only two of the five major criteria: Family Partnerships and Adult-Child Ratio/Group Size were determined to be good candidates for the key indicator Methodology in which the data were skewed\(^6\) enough to warrant dichotomization. The other three major criteria: Learning Environment, Training and Education, and Program Accreditation were determined not to be sufficiently skewed to warrant dichotomization. This sets up a decision making system in which only 40% of the criteria are being used and severely limits the overall predictability of the key indicators selected. Could the other criteria be used to generate key indicators? Of course, but dichotomization of data should not be done when data are not highly skewed (MacCallun, et al, 2002). Yes, we were successful in generating Key Indicators for the Qualistar Rating but within a limited scenario in how they should be used. The results are not equivalent to what has been found and utilized in the licensing literature where the licensing data are always highly skewed. If a state or program find that all the standards are skewed in a similar way to licensing data then dichotomization of data and the generation of key indicators is warranted.

A recommendation to Colorado’s Qualistar and other programs and states where they find the data from their standards more normally distributed that they not use a key indicator approach. The key indicator approach remains a reliable and valid methodology for licensing but only in very special and limited cases will it be an appropriate monitoring approach for more program quality focused systems, such as QRS/QRIS and accreditation. For those QRS/QRIS systems where the standards are more normally distributed, the recommendation would be to continue to use the full set of QRS/QRIS standards and not use an abbreviated set of standards.
NOTES:

1. For analytical purposes, the top 10% of programs received an average score of 8 points or higher on a 10 point scale and the bottom 10% of programs received an average score of 2 points or less on a 10 point scale.

2. The reason for pointing out the need to have a higher Phi Coefficient than what has been reported previously (Fiene & Nixon, 1983, 1985) is the fact that the dichotomization of data should only be used with skewed data and not normally distributed data because it will accentuate differences. However, since the purpose of the dichotomization of data is only for sorting into a high and low group, it would appear to be acceptable for this purpose (MacCallun, etal, 2002. On the practice of dichotomization of quantitative variables, Psychological Methods, 7, 1, 19-40.).

3. These results would show an increase in cells B and C in Figure 1 which is undesirable; it should always be the case where A + D > B + C for key indicators to maintain their predictive validity.

4. The following point values equate to the various Star levels in the Qualistar Rating System (for detailed information regarding the QRS system please see the following document: Qualistar Colorado – Qualistar Rating Criteria Chart, November 2012):

   Provisional = 0 – 9 points or Learning Environment score of 0
   Star 1 = 10 - 17 points
   Star 2 = 18 - 25 points
   Star 3 = 26 - 33 points
   Star 4 = 34 - 42 points

   Qualistar Rating Criteria Chart:
   Learning Environment = points are awarded based on average classroom scores on the ERS Scales. (Score of component: 1 – 10)
   Family Partnerships = points are awarded based on how well programs communicate with collaborate with, and involve families. Score of component: 1 – 10)
   Training and Education = points are awarded to teachers & center administrators based on their professional development level and amount of experience, with criteria separated by position. Score of component: 1 – 10
   Adult-to-Child Ratios & Group Size = points are awarded based on the average adult-to-child ratio and group size in each classroom. Score of component: 1 – 10
   Program Accreditation = points are awarded for receiving and maintaining national program accreditation through an approved organization. Score of component: 0 or 2 points

   *The reader needs to keep in mind that Qualistar Colorado is not a state agency but rather a private non-profit agency.*

5. The three Family Partnership Standards were met at the Star 4 level always or most of the time (see Figure 2).

6. The respective skewness figures are the following: Family Partnership = -1.425; Adult-Child Ratio/Group Size = -1.506; Learning Environment = -0.946; Training and Education = 0.028; Program Accreditation = 7.548. See Figure 16 for basic descriptive statistics for these Criteria.

For additional information regarding this Report, please contact:
Richard Fiene, Ph.D., Director/President, Research Institute for Key Indicators (RIKI), 41 Grandview Drive, Middletown, PA. 17057; DrFiene@gmail.com; 717-944-5868 Phone and Fax; http://RIKInstitute.wikispaces.com
REFERENCES AND ADDITIONAL RELATED READINGS REGARDING DIFFERENTIAL MONITORING, RISK ASSESSMENT, AND KEY INDICATOR METHODOLOGIES:


☐ Fiene (2013d). Kansas Child Care Key Indicators. Middletown: Pennsylvania, Research Institute for Key Indicators.


Appendix – Figure 8

DIFFERENTIAL MONITORING LOGIC MODEL & ALGORITHM (DMLMA©) (Fiene, 2012): A 4th Generation ECPQIM – Early Childhood Program Quality Indicator Model

\[ CI \times PQ \Rightarrow RA \Rightarrow DM \Rightarrow PD \Rightarrow CO \]

Definitions of Key Elements:

- **PC** = Program Compliance/Licensing (Health and Safety) (*Caring for Our Children*)
- **PQ** = QRIS/Accreditation/Caregiver/Child Interactions/Classroom Environment Quality (*ERS/CLASS/PAS/BAS*)
- **RA** = Risk Assessment, (High Risk Rules) (*Stepping Stones*)
- **KI** = Key Indicators (Predictor Rules) (*13 Key Indicators of Quality Child Care*)
- **DM** = Differential Monitoring (How often to visit and what to review)
- **PD** = Professional Development/Technical Assistance/Training (Not pictured but part of Model)
- **CO** = Child Outcomes (Not pictured but part of Model)

---

Diagram: Comprehensive Licensing Tool (CI) Structural Quality

Comprehensive Licensing Tool (CI) Structural Quality → Risk Assessment Tool (RA) → Differential Monitoring (DM) → Program Quality Tool (PQ) - QRIS Process Quality → Key Indicator Tool (KI)
Appendix – Figure 9 - Licensing Rules, Compliance Reviews, Differential Monitoring, Abbreviated Tools, Risk Assessment, and Key Indicators

- All Licensing Rules – Full Compliance Reviews
- Differential Monitoring
  - How Often to Visit?
  - What is Reviewed?
- Frequency
  - More Often
  - Less Often
- Abbreviated Tool
  - Risk Assessment Weights
  - Key Indicators Predictors
APPENDIX

Figures 10-14 depict the data distributions for overall Star points as well as for the major criteria/standards (Training & Education, Learning Environment, Adult-to-Child Ratios & Group Size, and Family Partnerships). Figures 13-14 clearly demonstrate how these respective criteria/standards are extremely skewed data distributions while Figures 10-12 show a more normally distributed data pattern. This is important for which standards can be dichotomized and phi coefficients generated. Dichotomization of data should only be used with skewed data which is the case in figures 13-14. It is not appropriate with the data distributions in figures 10-12. Also see Figure 16 for additional descriptive statistics for the specific criteria.
Figure 11

TRAINING EDUCATION STAR POINTS
Figure 12
Figure 13

[Bar chart showing distribution of ratio star points]

- X-axis: Ratio Star Points
- Y-axis: Frequency
- Data points for ratio star points 3 to 10 are shown.
Figure 14

![Bar chart showing Family Partnership Star Points distribution.](chart.png)
Figure 15

Selected Relationships amongst the Standards/Criteria and Star Level

<table>
<thead>
<tr>
<th>Standards/Criteria</th>
<th>Correlation (r)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Family Partnerships x Star Level</td>
<td>.80****</td>
</tr>
<tr>
<td>Learning Environment x Star Level</td>
<td>.68***</td>
</tr>
<tr>
<td>Training/Education x Star Level</td>
<td>.54**</td>
</tr>
<tr>
<td>Adult-Child Ratio/Group Size x Star Level</td>
<td>.46*</td>
</tr>
<tr>
<td>Program Accreditation x Star Level</td>
<td>.11</td>
</tr>
</tbody>
</table>

* p < .05  
** p < .01  
*** p<.001  
**** p < .0001

Figure 15a

<table>
<thead>
<tr>
<th>Family Partnership Criteria</th>
<th>Phi</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Criterion 1</td>
<td>.23</td>
<td>ns</td>
</tr>
<tr>
<td>Criterion 2</td>
<td>.53</td>
<td>.02</td>
</tr>
<tr>
<td>Criterion 3</td>
<td>.46</td>
<td>.04</td>
</tr>
<tr>
<td>Criterion 4</td>
<td>.46</td>
<td>.04</td>
</tr>
<tr>
<td>Criterion 5</td>
<td>1.00</td>
<td>.001</td>
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<tr>
<td>Criterion 6</td>
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<td>.04</td>
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<td>Criterion 7</td>
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<td>.001</td>
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<td>Criterion 8</td>
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<td>Criterion 9</td>
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<td>.001</td>
</tr>
<tr>
<td>Criterion 10</td>
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<td>.006</td>
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<tr>
<td>Criterion 11</td>
<td>.46</td>
<td>.04</td>
</tr>
<tr>
<td>Criterion 12</td>
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<td>Criterion 13</td>
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<td>ns</td>
</tr>
<tr>
<td>Criterion 16</td>
<td>.75</td>
<td>.001</td>
</tr>
<tr>
<td>Criterion 17</td>
<td>.60</td>
<td>.006</td>
</tr>
</tbody>
</table>

Legend:
Criteria 1 – 7 involve the program providing information to families.
Criteria 8 – 15 involve families in planning, communicating and decision making for the program.
Criteria 16 – 17 involve a written plan and evaluating the program’s family partnerships.
Family Partnerships and Adult-Child Ratio/Group Size standards/criteria phi coefficients were generated because of the skewed data distributions. Phi coefficients were not generated for Learning Environment, Training and Education or Program Accreditation because the data were not sufficiently skewed or showed no variability at all in their respective distributions.

Figure 16

Basic Descriptive Statistics for Criteria

<table>
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ECELS Infant Toddler Program Quality Improvement Project (ITQIP)  
Report of Pre-Test Data Collection  

Richard Fiene, Ph.D.  
August 1, 2014  

ABSTRACT  

This brief report will provide an analysis of the sites selected as part of the Infant Toddler Program Quality Improvement Project (ITQIP) in the Pre-Test data collection phase.  

INTRODUCTION  

This report is the initial analysis looking at the pre-test scores between the 16 intervention sites and the 16 control sites. This will be a descriptive report demonstrating the likenesses and differences between the two groups.  

The evaluation plan (see Figure 1 for the Logic Model Display) is a classic randomly assigned clinical trial in which a group of child care programs will be randomly assigned to the intervention group in receiving the specific training and technical assistance specific to the selected CFOC3 standards. A comparison group also randomly assigned will receive the typical training and technical assistance that is available through the state training system. These two groups will be compared on the pre-test for equivalency and then one year later in a post-test format. At this point the intervention group will be switched to a comparison format and the comparison group will become the intervention group. If funding can be found to pay for it, a second post-test would be performed at this data point to determine the latent effects of the training/technical assistance.
**RESULTS of Pre-Test**

**Intervention Group**
The range in scores was 175 to 267 with an average score of 208 out of a possible 322 points (65%).

**Control Group**
The range in scores was 164 to 271 with an average score of 219 out of a possible 322 points (68%).

The results clearly demonstrate that there are no significant differences between the two groups on the pre-test scores with the exception of three items (SS 240, CA310, CA42).
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ECELS Infant Toddler Program Quality Improvement Project (ITQIP)

Richard Fiene, Ph.D.

September 1, 2015

ABSTRACT

This brief report provides an analysis of the sites selected as part of the Infant Toddler Program Quality Improvement Project (ITQIP) in comparing data from the pre-test to post-test for both the Intervention and Control Groups. It is clearly demonstrated in the results that the Intervention Group was very effective in producing change in making sure children were being immunized, proper medication administration and sleep policies, identifying child abuse and prevention, proper adult hygiene and proper diapering, and ensuring infant and toddler activities and outdoor play.

INTRODUCTION

This report compares pre-test and post-test scores between the 13 intervention sites and the 16 control sites of the Infant Toddler Program Quality Improvement Project. This will be a descriptive report demonstrating the likenesses and differences between the two groups.

The evaluation plan (see Figure 1 for the Logic Model Display) is a classic randomly assigned clinical trial in which a group of child care programs will be randomly assigned to the intervention group in receiving the specific training and technical assistance specific to the selected CFOC3 standards. A comparison group also randomly assigned will receive the typical training and technical assistance that is available through the state training system. These two groups will be compared on the pre-test for equivalency and then one year later in a post-test format. At this point the intervention group will be switched to a comparison format and the comparison group will become the intervention group. If funding can be found to pay for it, a second post-test would be performed at this data point to determine the latent effects of the training/technical assistance.
RESULTS of Pre-Test to Post-Test (Summary and Detailed Item Results)

Intervention Group
The range in scores was 175 to 267 with an average score of 212 out of a possible 322 points (66%) on the pre-test. The range in scores was 213 to 297 with an average score of 254 out of a possible 322 points (79%) on the post-test. This change from pre-test to post-test was statistically significant (t = -4.62; p < .0001).

Control/Comparison Group
The range in scores was 164 to 271 with an average score of 218 out of a possible 322 points (68%) on the pre-Test. The range in scores was 149 to 257 with an average score of 221 out of a possible 322 points (69%) on the post-test. All these changes from pre- to post-test were non-significant.

Intervention – Control/Comparison Groups
The average scores between the Intervention (212) and Control (218) groups on the pre-test were non-significant. The average scores between the Intervention (254) and Control (221) groups on the post-test were statistically significant (t = -3.46; p < .002).
**Intervention (I) and Control (C) Group Comparisons from Pre-Test to Post-Test**  
Significant Changes Based Upon t-test Analyses and Comparisons of Intervention &  
Control Groups at Post-Test for Each Item (NS = Not Significant; S = Significant)  

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**DISCUSSION**

It is clear from the results that the intervention was very effective in the pre to post-test scores on a number of items ($N = 15$) that showed a statistically significant change from pre- to post-test for the Intervention Group and 13 items in comparing the Intervention Group to the Control Group also showed a statistically significant change. At the same time there was only one item in the Control/Comparison Group that showed a statistically significant change from pre- to post-test. As a footnote, there were also only 3 items that showed a statistically significant difference between the Intervention and Control Groups on the pre-test (Fiene, 2014).

These results are rather robust given the small sample size ($N = 13$ for the Intervention Group and $N = 16$ for the Control Group). This specific intervention utilizing Community Health Care Consultants is a viable coaching/mentoring intervention that needs additional exploration in replication studies. At least when it comes to *Caring for Our Children* standards this is a first demonstration of an effective training/technical assistance/coaching/mentoring intervention.
The intervention appeared to be most effective in making improvements in the following areas:

- children being immunized,
- proper medication administration,
- sleep policies,
- identifying child abuse and prevention,
- adult hygiene and proper diapering,
- infant and toddler activities and outdoor play.

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ECELS Infant Toddler Program Quality Improvement Project (ITQIP)

Richard Fiene, Ph.D.

August 15, 2016

ABSTRACT

This brief report provides an analysis of the sites selected as part of the Early Childhood Education Linkage System (ECELS) Infant Toddler Program Quality Improvement Project (ITQIP) in comparing data from the pre-test to two post-tests for both the Intervention and Control Groups. It is clearly demonstrated in the results that the Intervention Group was very effective in producing change in selected health and safety standards from Caring for Our Children, such as: making sure children were being immunized; received training on proper medication administration; received and reviewed safe sleep policies and have been trained; were provided the necessary education, policies, and procedures for child abuse and prevention; followed proper adult hygiene and proper diapering protocols; and ensured infants and toddlers had adequate activities and outdoor play. This result occurred in both interventions: Intervention to Control and Control to Intervention.

INTRODUCTION

This report compares pre-test and two post-test scores of the 13 intervention sites and 13 control sites enrolled in an Infant Toddler Program Quality Improvement Project. This is a descriptive report demonstrating the similarities and differences between the two groups.

The evaluation plan (see Figure 1 for the Logic Model Display) is a classic randomly assigned clinical trial in which a group of child care programs were randomly assigned to the intervention group to receive the training and technical assistance specifically targeted to selected Caring for Our Children (3rd Edition) CFOC3 standards. A comparison group also randomly assigned had access to the typical training and technical assistance that is available through the state training system in Pennsylvania. These two groups were compared on the pre-test for equivalency and then one year later in a post-test format. At that point the intervention group was switched to a cross-over comparison format and the comparison group was switched to the intervention group. The second post-test showed a significant positive change when the previous control group became the intervention group for this phase of the evaluation. Persistent effects of the
training/technical assistance specifically targeted to the selected standards were found for the original intervention group.

**Figure 1: EVALUATION PLAN LOGIC MODEL**

**RESULTS of Pre-Test to the two Post-Tests**

**Intervention Group**
On the pre-test, the range in scores was 175 to 267 with an average score of 212 out of a possible 322 points (66%). On the post-test, the range in scores was 213 to 297 with an average score of 254 out of a possible 322 points (79%). This change from pre-test to post-test was statistically significant (t = -4.62; p < .0001). The second post-test did not show any significant change but the initial results from the intervention were maintained (254 to 254).

**Control/Comparison Group**
The range in scores was 164 to 271 with an average score of 218 out of a possible 322 points (68%) on the pre-Test. The range in scores was 149 to 257 with an average score of 221 out of a possible 322 points (69%) on the first post-test. All these changes from pre- to post-test were non-significant. The second post test showed significant change from the previous initial post-test to the second post-test (221 to 243)(t = -1.80; p < .08) when this group received the intervention.

**Intervention – Control/Comparison Groups**
The average scores between the Intervention (212) and Control (218) groups on the pre-test were non-significant. The average scores between the Intervention (254) and Control (221) groups on the post-test were statistically significant (t = -3.46; p < .002). The second post test showed no
significant difference between the post-intervention scores for the initial intervention group and the control/comparison (delayed intervention) group change (254 vs 243).

The above graph depicts the relationship between the Intervention and the Control groups in a Crossover design. It clearly demonstrates how effective the intervention (Pre to Post1) was for the original intervention group and that the effects were persistent effects (Post1 to Post2). It also shows that the intervention was effective when the control group was switched to be the intervention group and received the targeted training and technical assistance in a delayed fashion after their pre-test assessment. (Post1 to Post2).

**DISCUSSION**

It is clear from the results that the intervention of working with the Child Care Health Consultants (CCHC) was very effective in the pre to post-test scores. This intervention helped to improve the overall quality of specifically targeted health standards, such as: making sure children were being immunized; receiving training for proper medication administration; receiving and reviewing safe sleep policies and training; receiving the necessary education, policies, and procedures for preventing and recognizing child abuse; following proper adult hygiene and proper diapering protocols; and ensuring infants and toddlers had adequate activities and outdoor play. This occurred in both the original intervention and when the control group was switched to a delayed intervention group. This is a very significant finding because it
clearly demonstrates the strength of this intervention (CCHC coaching/mentoring) and its lasting value i.e. the original intervention group sustained its original quality gains.

This specific intervention utilizing CCHCs is a viable coaching/mentoring intervention that needs additional exploration in replication studies. At least when it comes to *Caring for Our Children* standards this is a demonstration that CCHC consultation is an effective training/technical assistance/coaching/mentoring intervention. See the details in the following appendices.

Appendix A

**Group A (Intervention crossover to Control) – Post1 to Post2 Comparisons**

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</table>

ns = not significant.
Appendix C

Post2 – Group A (Control) versus Group B (Intervention) Comparisons

<table>
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<tr>
<th>Item</th>
<th>Group A</th>
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<th>Differences</th>
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| DC242 | 3.00 | 2.92 | ns |
| DC243 | 2.85 | 2.91 | ns |
| DC244 | 2.62 | 2.62 | ns |
| DC245 | 2.62 | 2.54 | ns |
| DC246 | 2.69 | 2.92 | ns |
| DC247 | 3.00 | 1.80 | ns |
| DC248 | 2.69 | 2.60 | ns |
| DC249 | 2.31 | 1.77 | ns |
| DC250 | 3.00 | 2.62 | ns |
| DC251 | 3.00 | 3.00 | ns |
| DC252 | 2.39 | 2.23 | ns |
| DC253 | 3.00 | 3.00 | ns |
| DC254 | 2.46 | 2.62 | ns |
| DC255 | 2.92 | 2.69 | ns |
| DC256 | 2.92 | 2.46 | ns |
| HH257 | 2.39 | 2.31 | ns |
| HH258 | 2.54 | 1.54 | ns |
| HH259 | 1.69 | 2.46 | .05
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| HH261 | 2.39 | 2.08 | ns |
| HH262 | 2.23 | 1.77 | ns |
| HH263 | 2.31 | 2.08 | ns |
| HH264 | 2.62 | 1.69 | ns |
| CA31 INTER | 3.00 | 2.57 | ns |
| CA32 | 2.67 | 3.00 | ns |
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ns = not significant.
This short paper provides the technical and statistical aspects of the Fiene key indicator methodology©. It will provide the roadmap in taking businesses through the necessary steps to generating the respective key indicators which will then predict overall successful outcomes for their respective businesses.

One of the first steps is to sort the data into high and low groups, generally the highest and lowest ratings can be used for this sorting. Frequency data will be obtained on those data elements in the top level (usually top 20-25%) and the bottom level (usually the bottom 20-25%). The middle levels are not used for the purposes of these analyses. These two groups (top level & the bottom level) are then compared to how each data element (see Figure 1). An example would be the following: let’s say a business has varying levels of success in selling a specific product. Sort all the salespersons by the number in the highest group and the lowest group by successful sales. Then determine how the groups scored on specific data elements, such as number of phone calls back to each client. Sort the number of phone calls into the top 25% number of calls and the bottom 25% of calls. Fill in the cells within Figure 1 accordingly (see Figure 2).

<table>
<thead>
<tr>
<th>Figure 1</th>
<th>Data Element in the Top 25%</th>
<th>Data Element in the Bottom 25%</th>
<th>Row Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Highest level (top 20-25%)</td>
<td>A</td>
<td>B</td>
<td>Y</td>
</tr>
<tr>
<td>Lowest level (bottom 20-25%)</td>
<td>C</td>
<td>D</td>
<td>Z</td>
</tr>
<tr>
<td>Column Total</td>
<td>W</td>
<td>X</td>
<td>Grand Total</td>
</tr>
</tbody>
</table>
Figure 2 depicts that all programs that were in the top 25% (5+ calls) were also in the highest rating while the bottom 25% (3 or fewer calls) were also in the lowest rating.

<table>
<thead>
<tr>
<th>Figure 2</th>
<th>5+ Calls</th>
<th>3 or Fewer Calls</th>
<th>Row Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Highest Level</td>
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<td>0</td>
<td>117</td>
</tr>
<tr>
<td>Lowest Level</td>
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<tr>
<td>Column Total</td>
<td>117</td>
<td>35</td>
<td>152</td>
</tr>
</tbody>
</table>

Once the data are sorted in the above matrix, the following formula (Figure 3) is used to determine if Item 16 is a key indicator or not by calculating its respective Fiene coefficient. Please refer back to Figure 1 for the actual placement within the cells and Figure 2 for the data within the cells. The legend (Figure 4) below the formula shows how the cells are defined.

**Figure 3 – Formula for Fiene Coefficient**

\[
\phi = \frac{(A)(D) - (B)(C)}{\sqrt{(W)(X)(Y)(Z)}}
\]

**Figure 4 – Legend for the Cells within the Fiene Coefficient**

- **A** = High Group + Data Element in High Group.
- **B** = High Group + Data Element in Low Group.
- **C** = Low Group + Data Element in High Group.
- **D** = Low Group + Data Element in Low Group.
- **W** = Total Number of Times Data Element in High Group.
- **X** = Total Number of Times Data Element in Low Group.
- **Y** = Total Number of Times in High Group.
- **Z** = Total Number of Times in Low Group.

Once the data are run through the formula in Figure 3, the following chart (Figure 5) can be used to make the final determination of including or not including the item as a key indicator. Based upon the chart in Figure 5, it is best to have a Fiene Coefficient approaching +1.00 if we are dealing with normally distributed data\(^1\). This requirement is relaxed with skewed data (+.26 and higher).
Continuing with the chart in Figure 5, if the Fiene Coefficient is between +.25 and -.25, this indicates that the indicator is unpredictable in being able to predict overall compliance with the quality rating assessment tool. Either a false positive in which the indicator appears too often in the low group as being in compliance, or a false negative in which the indicator appears too often in the high group as being out of compliance.

The last possible outcome with the Fiene Coefficient is if it is between -.26 and -1.00, this indicates that the indicator is a terrible predictor because it is doing just the opposite of the decision we want to make. The indicator would predominantly be in compliance with the low group rather than the high group so it would be statistically predicting overall non-compliance. This is obviously something we do not want to occur.

**Figure 5 – Thresholds for the Fiene Coefficient**

<table>
<thead>
<tr>
<th>Fiene Coefficient Range</th>
<th>Characteristic of Indicator</th>
<th>Decision</th>
</tr>
</thead>
<tbody>
<tr>
<td>(+1.00) – (+.26)</td>
<td>Good Predictor</td>
<td>Include</td>
</tr>
<tr>
<td>(+.25) – (-.25)</td>
<td>Unpredictable</td>
<td>Do not Include</td>
</tr>
<tr>
<td>(-.26) – (-1.00)</td>
<td>Terrible Predictor</td>
<td>Do not Include</td>
</tr>
</tbody>
</table>

Notes:

1. The reason for pointing out the need to have a higher Phi Coefficient than what has been reported previously is the fact that the dichotomization of data should only be used with skewed data and not normally distributed data because it will accentuate differences. However, since the purpose of the dichotomization of data is only for sorting into a high and low group, it would appear to be acceptable for this purpose (MacCallun, etal, 2002. On the practice of dichotomization of quantitative variables, *Psychological Methods, 7, 1, 19-40*).

2. These results would show an increase in cells B and C in Figure 1 which is undesirable; it should always be the case where A + D > B + C for key indicators to maintain their predictive validity.

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Technical Detail Notes: Validation Updates to the Fiene Key Indicator Systems

January 2015

These notes will provide guidance on validating existing Key Indicator Licensing Systems. These notes are based upon the last three years of research and data analysis in determining the best means for conducting these validation studies.

These notes are based upon existing Key Indicator Systems in which data can be drawn from an already present data base which contains the comprehensive instrument (total compliance data) and the key indicator instrument (key indicator rule data). When this is in place and it can be determined how licensing decisions are made: full compliance with all rules or substantial compliance with all rules to receive a license, then the following matrix can be used to begin the analyses (see Figure 1):

<table>
<thead>
<tr>
<th>Figure 1</th>
<th>Providers who fail the Key Indicator review</th>
<th>Providers who pass the Key Indicator review</th>
<th>Row Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Providers who fail the Comprehensive review</td>
<td>W</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Providers who pass the Comprehensive Review</td>
<td>Y</td>
<td>Z</td>
<td></td>
</tr>
<tr>
<td>Column Totals</td>
<td></td>
<td></td>
<td>Grand Total</td>
</tr>
</tbody>
</table>

| Column Totals | Grand Total |
A couple of annotations regarding Figure 1.

\[ W + Z = \text{the number of agreements in which the provider passed the Key Indicator review and also passed the Comprehensive review.} \]

\[ X = \text{the number of providers who passed the Key Indicator review but failed the Comprehensive review. This is something that should not happen, but there is always the possibility this could occur because the Key Indicator Methodology is based on statistical methods and probabilities. We will call these False Negatives (FN).} \]

\[ Y = \text{the number of providers who failed the Key Indicator review but passed the Comprehensive review. Again, this can happen but is not as much of a concern as with "} X \text{". We will call these False Positives (FP).} \]

Figure 2 provides an example with actual data from a national organization that utilizes a Key Indicator System. It is taken from 50 of its program providers.

<table>
<thead>
<tr>
<th>Figure 2</th>
<th>Providers who fail the Key Indicator review</th>
<th>Providers who pass the Key Indicator review</th>
<th>Row Total</th>
</tr>
</thead>
<tbody>
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<td>providers who fail the Comprehensive review</td>
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<td>1</td>
<td>26</td>
</tr>
<tr>
<td>providers who pass the Comprehensive Review</td>
<td>7</td>
<td>17</td>
<td>24</td>
</tr>
<tr>
<td>Column Total</td>
<td>32</td>
<td>18</td>
<td>50</td>
</tr>
</tbody>
</table>

To determine the agreement ratio, we use the following formula:

\[ \frac{A}{A + D} \]

Where \( A \) = Agreements and \( D \) = Disagreements.
Based upon Figure 2, \( A + D = 42 \) which is the number of agreements; while the number of disagreements is represented by \( B = 1 \) and \( C = 7 \) for a total of 8 disagreements. Putting the numbers into the above formula:

\[
\frac{42}{42 + 8}
\]

Or

\[
.84 = \text{Agreement Ratio}
\]

The False Positives (FP) ratio is .14 and the False Negatives (FN) ratio is .02. Once we have all the ratios we can use the ranges in Figure 3 to determine if we can validate the Key Indicator System. The FP ratio is not used in Figure 3 but is part of the Agreement Ratio.

**Figure 3 – Thresholds for Validating the Fiene Key Indicators for Licensing Rules**

<table>
<thead>
<tr>
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<td>(.89) – (.85)</td>
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<td>(.84) – (.00)</td>
<td>.11 or more</td>
<td>Not Validated</td>
</tr>
</tbody>
</table>
RESOURCES AND NOTES

For those readers who are interested in finding out more about the Key Indicator Methodology and the more recent technical updates as applied in this paper in actual state examples, please see the following publication:

Fiene (2014). ECPQIM4©: Early Childhood Program Quality Indicator Model4, Middletown: PA; Research Institute for Key Indicators LLC (RIKI). (http://drfiene.wordpress.com/riki-reports-dmlma-ecpqim4/)

In this book of readings/presentations are examples and information about differential monitoring, risk assessment, key indicators, validation, measurement, statistical dichotomization of data, and regulatory paradigms. This publication delineates the research projects, studies, presentations, & reports completed during 2013-14 in which these updates are drawn from.

For those readers interested in a historical perspective to the development of the Key Indicator methodology and licensing measurement, please see the following publications (most of these publications are available at the following website (http://rikinstitute.wikispaces.com/home):

For additional information regarding this paper please contact:
Dr Richard Fiene
Research Institute for Key Indicators LLC (RIKI)
41 Grandview Avenue
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The Relationship of Licensing, Head Start, Pre-K, QRIS, Accreditation, and Professional Development and their Potential Impact on Child Outcomes

Richard Fiene, Ph.D.

October 11, 2013

ABSTRACT

This short paper will provide some thoughts about the various public policy initiatives/systems to improve early care and education, such as licensing, Head Start, Pre-K, QRIS, accreditation, and professional development and their potential impact on child outcomes. Early care and education is at a major crossroads as a profession in attempting to determine which quality initiatives have the greatest impact on children. Results are starting to come in from early studies which may provide some guidance as policy makers begin making decisions about where to focus their limited funding resources.

Improving early care and education programs has a long public policy history as we attempt to find the most cost effective and efficient means for attaining this lofty goal. There have been many ups and downs over the years where funding was adequate and when it was not, but our desire to accomplish this goal has always been front and center. Now, as a profession, we are at somewhat of a crossroads in determining which of the many quality initiatives appear to have the greatest impact on children’s development. When I refer to children’s development, I am looking at the whole child from the perspective of a child’s developmental status as well as the child’s health and safety.

Presently we have many quality initiatives to look at which is a very good thing since at times in the past we did not always have so many choices. Probably the one constant throughout the history of early care and education in the past century has been licensing or regulations/rule formulation. Some many argue that licensing is not a quality initiative but I would suggest that licensing has many of the structural aspects of quality that have been identified in the research literature. The other quality initiatives I will discuss have really started and been implemented in the very later part of the 20th century so we are talking about a relatively new science when we think about having its intended impact on children. Also, I am talking about large public policy initiatives rather than highly structured, single focused research studies involving small samples of children.
Let’s start with licensing since this system has been present for the longest period of time. The purpose of licensing is to act as the gatekeeper to the early care and education field in which only those providers who meet specific standards, generally called rules or regulations are permitted to operate and care for children. The rules are dominated by health and safety concerns with less emphasis on curriculum planning and staff-child interactions. The rules measure more structural aspects of quality than the process aspects of quality; dealing with what attorney’s call the “hard data” rather than the “soft data”.

Since licensing rules allow entry into the early care and education field to provide services usually the rules are not overly stringent with the majority of providers being in high compliance if not full compliance with all the rules. This would be expected since these are basic health and safety standards. And in fact when one looks at compliance data, it is extremely skewed with the majority of providers having very high compliance scores with relatively few violations of the rules. However, this does introduce a certain difficulty in using these data for decision making purposes at an aggregate level because so many providers score at a high level it becomes increasingly difficult to distinguish between the really excellent providers and the somewhat mediocre providers. Another way of looking at this skewing of the data is to term it as a plateau effect in which there is very little variance at the upper ends of the compliance spectrum. This is a major issue with skewed data and basic standards which is an important consideration with licensing but will also be an important consideration when one looks at the other quality initiatives to be addressed shortly.

Because of this plateau effect with licensing data, it may explain much of the lack of relationships found between compliance with rules and any types of outcomes related to children’s outcomes and provider’s overall quality. However, with licensing data and making comparisons to children’s outcomes we should be looking at general health data such as immunization status and safety data such as the number of injuries at programs with varying levels of compliance with health and safety rules.

A significant development over the past two decades has been the development of national health and safety standards with the publication of Caring for Our Children (CFOC3) and Stepping Stones (SS3). Although these standards are not required but are only recommended practice that provides guidance to states as they revise their rules, these two documents have been embraced by the licensing/regulatory administration field. Although unlikely, if not impossible, to comply with all the CFOC3 standards, it would be interesting to compare states on this set of standards which may add a good deal of variance to the basic health and safety data that has been missing with licensing rules.

The next system to look at is the national Head Start program. Out of the major programs that are national in scope, Head Start has a long history of providing services to low income children and their families. Head Start Performance Standards are definitely more stringent than licensing rules but not as stringent as accreditation standards. Based upon Head Start’s more stringent
standards and the additional supports that are part of its program, Head Start generally scores higher on program quality tools (e.g., CLASS or ERS) than licensed child care in states.

With Head Start programs, we at times find skewing or plateauing of data when we compare compliance with the Head Start Performance Standards (HSPS) and program quality tools such as the CLASS. However, this is dependent upon the various subscales within the CLASS in which the plateauing of data does not occur all of the time. I think that has a lot to do with the HSPS being fairly stringent standards as compared to state licensing rules in general.

A program that has gotten a good deal of support at the state level are Pre-K programs. These programs come with stricter standards than licensed child care with an emphasis on the professional development of staff. There is more concern about the process aspects of quality which focus more on teacher-child interactions. This emphasis on teacher-child interaction has paid off in which these programs generally are high performers when you compare Pre-K funded classrooms to licensed child care classrooms. In fact, Pre-K funding appears to have a positive impact on licensed child care in raising overall quality scores on the ECERS-R for all classrooms in programs that receive Pre-K funding even if some of the classrooms are not the direct beneficiaries of the funding. This is a very significant finding because we knew that Pre-K funding increased the quality of care in classrooms receiving those funds, but now, it appears that there is a spillover effect to all classrooms co-located with Pre-K funded classrooms. I must admit that I was initially skeptical when Pre-K funding was first proposed because I thought it would take funding and the focus away from improving licensed child care at the state level; but it appears that the advocates for Pre-K were right in their assertion that Pre-K would increase the quality of all early care and education which includes licensed child care.

A more recent entry into the state funding scene are QRIS (Quality Rating and Improvement Systems) which build upon licensing systems, are voluntary, and have substantial financial incentives for participating in this quality improvement system. It is too early to really determine if QRIS is having the intended impact because the program is so new (50% of states have a QRIS), and the penetration rate is usually below 50% in any given state (remember the system is voluntary). However, in the few studies done, the results are mixed. It does appear that programs which move up the various star levels do increase the quality of care they provide; but in a most recent study looking at child outcomes, no relationship was found between increasing levels of compliance with QRIS standards and how well children did in those programs with the exception of CLASS scores in which teacher-child interactions were measured and emphasized – here there were significant relationships between higher scores on the CLASS and child outcomes.

Accreditation systems come in many varieties but there are only three that I know of in which empirical studies have been done to validate their systems: NAEYC, NECPA for centers and NAFDC for homes. Also reliability testing has been done in each of these systems. Accreditation is a rigorous self-study that really improves programs through the self-study
process. This should come as no surprise because we have known for some time that program monitoring all by itself leads to program improvements. Now when you couple that with technical assistance you see even more improvement. Accreditation is usually the other pillar of a QRIS system with licensing being the first pillar. The QRIS standards fill the gap from licensing to accreditation. Accreditation is a voluntary system just as in most cases with QRIS. However, in accreditation we are reaching less than 10% of the programs with the majority of these attaining NAEYC accreditation. NECPA and NAFDC have much smaller market shares.

The last system to be addressed is the professional development systems that have been established in all states. This is one quality improvement initiative that has 100% penetration in all states. It is usually tied to QRIS through technical assistance and mentoring (coaching). When it focuses on mentoring rather than workshops, it has demonstrated its effectiveness in changing teachers behaviors in how they interact with children in their care in a very positive fashion. This is very important because the research literature is clear about the importance of the teacher-child interaction when it comes to child outcomes. Professional development runs the gamut from pre-service (University based programs) to in-service (training, technical assistance, mentoring, coaching) programming for teachers and directors.

So where does this leave us when policy makers begin to try to determine which quality improvement initiatives should be invested in to start with, which to increase in funding, and maybe even which ones should be defunded. I think there are some trends we need to begin to look at, such as the following:

1) Having stringent and rigorous standards is very important. The more that we do not, the more opportunities for mediocre programs to score artificially higher on whatever scale that is used. This is evident with licensing data where the data are significantly skewed with a major plateau effect at the upper end of compliance rules/regulations.

2) Emphasis on teacher-child interaction needs to be paramount in our quality improvement initiatives. Working with teachers through mentoring/coaching appears to be most effective in changing teachers’ behaviors in interacting more positively with children.

3) Making sure we are measuring the right outcomes. Match health and safety standards with health and safety outcomes for children. Match developmental outcomes for children with standards that emphasize positive teacher-child interactions.

4) Building upon #1 above, find what the key indicators are with all the data that we collect. We are spending too much time in looking at too many things which in many cases are simply just not the right things to look at. As states’ data systems become more sophisticated, and they are, this will be easier to do. Let’s begin to utilize the data we have already collected.
An Opinion on Rules/Regulations, Standards, and Guidelines in Early Care and Education

Richard Fiene, Ph.D.

August 2014

Over the past two years there has been a great deal of activity and interest in the Early Care and Education (ECE) field related to rules/regulations, standards and guidelines. This interest comes at an opportune time as the ECE field develops a balance between licensing (program compliance), program quality improvement via QRIS (Quality Rating and Improvement Systems) & Pre-K programs, and structural and process quality.

Several publications have been put forth that represent these various activities which I would like to delineate and show how these various approaches fit together into a unified whole. The third edition of *Caring for Our Children* is the comprehensive set of standards/guidelines related to health and safety in the child care field. Its companion document called *Stepping Stones* is a risk assessment publication which focuses on those standards/guidelines that place children at greatest risk of mortality/morbidity. *Thirteen Indicators of Quality Child Care: Research Update* are the key indicators based upon *Stepping Stones* and *Caring for Our Children*. A relatively new approach *Caring for Our Children: Basics* is a combination of *Stepping Stones* and *Thirteen Indicators of Quality Child Care*.

I would like to propose the following model in how the above rules/regulations, standards and guidelines relate to each other and how one builds upon the other:

- **13 Key Indicators**.
- **Caring for Our Children: Basics** as the risk assessment/key indicator tool. **55 Standards**.
- **Stepping Stones** as the risk assessment tool based upon morbidity/mortality. **138 Standards**.
- **Caring for Our Children** standards/guidelines as the comprehensive set of health and safety standards/guidelines for the early care and education field. **650 Standards**.

This is a particularly exciting time in which we have several different tools that can be used to help improve early care and education programs via the above model for health and safety and then utilizing QRIS and Pre-K programs standards to build upon this solid licensing foundation.
An Opinion on Balancing Structural and Process Quality Indicators in Early Care and Education

I have been following a very interesting discussion in the early care and education field about quality indicators and their impact on young children. As QRIS (Quality Rating & Improvement Systems) systems have been providing the impetus for this discussion, I think it is time to readdress how process and structural quality indicators both benefit a child’s development, albeit in different domains. Hopefully this discussion will be one of inclusion rather than exclusion in which we do not place greater emphasis on process quality indicators at the expense of structural quality indicators which appears to be at the heart of this most recent discussion.

In the research literature, the focus of structural quality indicators are generally in the health and safety domain and are more regulatable, such as staff-child ratio, group size, supervision, child immunizations up to date, proper staff hand washing, etc; while the focus of process quality indicators have been interactions amongst children and staff which do not lend themselves to being regulatable easily.

As a developmental research psychologist I have been delighted with the increased focus on the process quality indicators and agree that we need to spend more time focusing our efforts on identifying the key indicators that make a difference in a child’s developmental life in early care and education. However, after 40 years of public policy research, I am not willing to throw the structural quality indicators “under the bus”. It is important to advocate for those process quality indicators that have an impact on a child’s language, social-emotional, motor, and cognitive development but we cannot leave out the child’s physical well-being and healthy development. My concern as I listen to my fellow researchers, policy makers, and legislative staff as I crisscross the country is that everyone is talking a lot about the process quality indicators with little regard to the continued importance of the structural quality indicators.

I have lectured on this topic more than I would like to admit over the past 5 years. I was hoping by now that the “either-or” discussion would have given way to an “and” discussion which accepts and embraces the contributions of both structural and process quality indicators to a child’s development. As of this writing, I haven’t seen a change and in fact I think the discussions are becoming more divisive rather than inclusionary. So for that reason I am putting on paper my above opinion about this discussion and the need for additional research to build more effective and efficient early care and education regulatory systems that have a balance between structural and process quality indicators.
An Opinion on Balancing Program Compliance (Licensing) with Program Quality Systems (Pre-K and QRIS) in Early Care and Education

In conducting several very recent studies where comparisons were made between program compliance as measured by state child care licensing systems and program quality as measured through Pre-K and QRIS (Quality Rating and Improvement Systems) some very interesting statistically significant trends in the data were observed.

I have published results in the past describing a curvilinear relationship between licensing compliance with program quality measures (Environmental Rating Scales (ERS) or the CLASS). With the advent of Pre-K and QRIS programs being introduced within states, we now have sufficient data to begin to analyze the impact that these quality improvement programs have on state early care and education programs building upon state licensing systems.

The results are very promising from the few states that I have worked with. From the data analyzed to date, both Pre-K and QRIS programs are having a very positive impact on the overall quality of ECE programs where the programs that either are in Pre-K or at the highest Quality level within the QRIS are also the programs scoring the highest on the respective quality assessments, the ERS or CLASS tools. Now this may not seem all that earthshattering but I have consistently found that this was not the case when I compared licensing compliance data with the ERS and CLASS data. The programs that were in full compliance with all the licensing rules were not necessarily the programs that scored the highest on the ERS or CLASS tools. In other words, there was a curvilinear relationship between the licensing data and the quality data.

From a public policy standpoint, this is a very important distinction because the licensing rules do help to protect children from harm in the health & safety arenas but do not necessarily mean the program is of the highest quality. It would appear from the most recent data that the way to get to this public policy result is through the introduction of either a Pre-K program or a QRIS program.

There is still work to be done to determine the exact indicators of Pre-K and QRIS programs that statistically predict child development outcomes but this requires additional research.

For those interested in continuing this discussion, please contact me at the following website: http://DrFiene.wordpress.com/home or go to http://RIKIInstitute.wikispaces.com/home for additional information about quality ECE key indicator research. I can also be reached at DrFiene@gmail.com
Technical Detail Updates to the Fiene Key Indicator Methodology

January 2015

The Key Indicator Methodology has recently been highlighted in a very significant Federal Office of Child Care publication series on Contemporary Licensing Highlights. In that Brief the Key Indicator Methodology is described as part of a differential monitoring approach along with the risk assessment methodology. Because of the potential increased interest in the Key Indicator Methodology, a brief update regarding the technical details of the methodology is warranted. For those readers who are interested in the historical development of Key Indicators I would suggest they download the resources available at the end of the paper.

This brief paper provides the technical and statistical updates for the key indicator methodology based upon the latest research in the field related to licensing and quality rating & improvement systems (QRIS). The examples will be drawn from the licensing research but all the reader needs to do is substitute “rule” for “standard” and the methodology holds for QRIS.

Before proceeding with the technical updates, let me review the purpose and conceptual underpinning of the Key Indicator Methodology. Key Indicators generated from the methodology are not the rules that have the highest levels of non-compliance nor are they the rules that place children most at risk of mortality or morbidity. Key Indicators are generally somewhere in the middle of the pack when it comes to non-compliance and risk assessment. The other important conceptual difference between Key Indicators and risk assessment is that only Key Indicators statistically predict or are predictor rules of overall compliance with all the rules for a particular service type. Risk assessment rules do not predict anything other than a group of experts has rated these rules as high risk for children’s mortality/morbidity if not complied with.

Something that both Key Indicators and risk assessment have in common is through their use one will save time in their monitoring reviews because you will be looking at substantially fewer rules. But it is only with Key Indicators that you can statistically predict additional compliance or non-compliance; this is not the case with risk assessment in which one is only looking at those rules which are a state’s high risk rules. And this is where differential monitoring comes into play by determining which programs are entitled to either Key Indicators and/or risk assessment for more abbreviated monitoring reviews rather than full licensing reviews (the interested reader.
Fiene Key Indicator Methodology

should see the *Contemporary Licensing Series on Differential Monitoring, Risk Assessment and Key Indicators* published by the Office of Child Care.

**Technical and Statistical Framework**

One of the first steps in the Key Indicator Methodology is to sort the licensing data into high and low groups, generally the highest and lowest licensing compliance with all the rules can be used for this sorting. Frequency data will be obtained on those programs in the top level (usually top 20-25%) and the bottom level (usually the bottom 20-25%). The middle levels are not used for the purposes of these analyses. These two groups (top level & the bottom level) are then compared to how each program scored on each child care rule (see Figure 1). In some cases, especially where there is very high compliance with the rules and the data are extremely skewed, it may be necessary to use all those programs that are in full (100%) compliance with all the rules as the high group. The next step is to look at each rule and determine if it is in compliance or out of compliance with the rule. This result is cross-referenced with the High Group and the Low Group as depicted in Figure 1.

<table>
<thead>
<tr>
<th>Figure 1</th>
<th>Providers In Compliance on Rule</th>
<th>Programs Out Of Compliance on Rule</th>
<th>Row Total</th>
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<tbody>
<tr>
<td><strong>Highest level</strong>&lt;br&gt;(top 20-25%)</td>
<td>A</td>
<td>B</td>
<td>Y</td>
</tr>
<tr>
<td><strong>Lowest level</strong>&lt;br&gt;(bottom 20-25%)</td>
<td>C</td>
<td>D</td>
<td>Z</td>
</tr>
<tr>
<td><strong>Column Total</strong></td>
<td>W</td>
<td>X</td>
<td>Grand Total</td>
</tr>
</tbody>
</table>

Once the data are sorted in the above matrix, the following formula (Figure 2) is used to determine if the rule is a key indicator or not by calculating its respective Key Indicator coefficient. Please refer back to Figure 1 for the actual placement within the cells. The legend (Figure 3) below the formula shows how the cells are defined.
Figure 2 – Formula for Fiene Key Indicator Coefficient

\[ \phi = \frac{(A)(D)-(B)(C)}{\sqrt{(W)(X)(Y)(Z)}} \]

Figure 3 – Legend for the Cells within the Fiene Key Indicator Coefficient

- A = High Group + Programs in Compliance on Specific Rule.
- B = High Group + Programs out of Compliance on Specific Rule.
- C = Low Group + Programs in Compliance on Specific Rule.
- D = Low Group + Programs out of Compliance on Specific Rule.
- W = Total Number of Programs in Compliance on Specific Rule.
- X = Total Number of Programs out of Compliance on Specific Rule.
- Y = Total Number of Programs in High Group.
- Z = Total Number of Programs in Low Group.

Once the data are run through the formula in Figure 2, the following chart (Figure 4) can be used to make the final determination of including or not including the rule as a key indicator. Based upon the chart in Figure 4, it is best to have a Key Indicator Coefficient approaching +1.00 however that is rarely attained with licensing data but has occurred in more normally distributed data.

Continuing with the chart in Figure 4, if the Key Indicator Coefficient is between +.25 and -.25, this indicates that the indicator rule is unpredictable in being able to predict overall compliance with the full set of rules. Either a false positive in which the indicator appears too often in the low group as being in compliance, or a false negative in which the indicator appears too often in the high group as being out of compliance. This can occur with Key Indicator Coefficients above +.25 but it becomes unlikely as we approach +1.00 although there is always the possibility that other rules could be found out of compliance. Another solution is to increase the number of key indicator rules to be reviewed but this will cut down on the efficiency which is desirable and the purpose of the key indicators.

The last possible outcome with the Key Indicator Coefficient is if it is between -.26 and -1.00, this indicates that the indicator is a terrible predictor because it is doing just the opposite of the decision we want to make. The indicator rule would predominantly be in compliance with the low group rather than the high group so it would be statistically predicting overall non-compliance. This is obviously something we do not want to occur.

Figure 5 gives the results and decisions for a QRIS system. The thresholds in a QRIS system are increased dramatically because QRIS standard data are less skewed than licensing data and a
more stringent criterion needs to be applied in order to include particular standards as Key Indicators.

**Figure 4 – Thresholds for the Fiene Key Indicators for Licensing Rules**

<table>
<thead>
<tr>
<th>Key Indicator Range</th>
<th>Characteristic of Indicator</th>
<th>Decision</th>
</tr>
</thead>
<tbody>
<tr>
<td>(+1.00) – (+0.26)</td>
<td>Good Predictor</td>
<td>Include</td>
</tr>
<tr>
<td>(+0.25) – (-0.25)</td>
<td>Unpredictable</td>
<td>Do not Include</td>
</tr>
<tr>
<td>(-0.26) – (-1.00)</td>
<td>Terrible Predictor</td>
<td>Do not Include</td>
</tr>
</tbody>
</table>

**Figure 5 – Thresholds for the Fiene Key Indicators for QRIS Standards**

<table>
<thead>
<tr>
<th>Key Indicator Range</th>
<th>Characteristic of Indicator</th>
<th>Decision</th>
</tr>
</thead>
<tbody>
<tr>
<td>(+1.00) – (+0.76)</td>
<td>Good Predictor</td>
<td>Include</td>
</tr>
<tr>
<td>(+0.75) – (-0.25)</td>
<td>Unpredictable</td>
<td>Do not Include</td>
</tr>
<tr>
<td>(-0.26) – (-1.00)</td>
<td>Terrible Predictor</td>
<td>Do not Include</td>
</tr>
</tbody>
</table>

**RESOURCES AND NOTES**

For those readers who are interested in finding out more about the Key Indicator Methodology and the more recent technical updates as applied in this paper in actual state examples, please see the following publication:


In this book of readings/presentations are examples and information about differential monitoring, risk assessment, key indicators, validation, measurement, statistical dichotomization of data, and regulatory paradigms. This publication delineates the research projects, studies, presentations, & reports completed during 2013-14 in which these updates are drawn from.
For those readers interested in a historical perspective to the development of the Key Indicator methodology and licensing measurement, please see the following publications (most of these publications are available at the following website (http://rikinstitute.wikispaces.com/home):


For additional information regarding this paper please contact:
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http://DrFiene.wordpress.com/home
Conclusion

Hopefully this research monograph has provided the reader with enough information to further explore the potential of the ECPQIM/DMLMA model. The ECPQIM/DMLMA has evolved over the past 40 years through 4 editions with the latest edition having been validated in various jurisdictions (please see the citation and reference listing as well as the specific section within this monograph.

The continuation of the differential monitoring, risk assessment and key indicator methodologies will be undertaken by the National Association for Regulatory Administration (NARA) in moving forward from 2016. For those who are interested in these methodologies, please see their website for further details and information (http://www.naralicensing.org).
PUBLICATIONS (Early Childhood Program Quality Indicators Model (ECPQIM))

Conceptual:


**QRIS and Quality Initiatives:**


Fiene, Greenberg, Bergsten, Carl, Fegley, & Gibbons (2002). The Pennsylvania early childhood quality settings study, Harrisburg, Pennsylvania: Governor’s Task Force on Early Care and Education.


**Licensing Measurement:**


**Professional Development:**


Fiene (2002). Improving child care quality through an infant caregiver mentoring project, *Child and Youth Care Forum*, 31(2), 75-83.


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PREFACE

The purpose of this chapter is to acquaint the licensing administrator with the science and art of measurement as it relates to regulatory administration. It is becoming more and more critical that licensing administrators have at least a rudimentary knowledge of measurement methods. Measurement is a key element of the new information age. It is the basis for the design and implementation of information systems, either manual or automated, conducting on-site inspections, making observations, interviewing and completing complaint investigations.

This chapter provides an overview to the major types of measurement tools used within the regulatory administration field related to assessing compliance with human care licensing rules. A historical perspective will be provided followed by outlines of key definitions. The types of measurement tools and systems will be reviewed. The final section of this chapter will address the relationship between measurement and rule formulation.

The sections titled Weighting Systems and Licensing Indicator Systems are heavily influenced by the two papers written by NARA Immediate Past President Karen E Kroh, Pennsylvania, in the late 1980s on these two topics.

Past NARA Secretary and Vice President Carolynne H Stevens, Virginia, and NARA Executive Director and Past President Pauline D Koch, Delaware, served as reviewers for this chapter.
INTRODUCTION

Measurement within regulatory administration has changed substantially from the 1970s through the 1990s. It has moved from being very qualitative to being more quantitative in nature. The qualitative nature was depicted with long narratives obtained from in-depth observations and interviews that described a facility in detail with a listing of violations with specific rules. The observations used a running record format in which a detailed accounting of the facility was obtained. This is in contrast to an anecdotal type of record that is used a great deal in the measurement literature related to observing behaviors. This qualitative system worked well when there were few facilities to be assessed. However, as the number of human care facilities increased and licensing agency administrators felt a greater need to understand compliance trends, movement to a more quantitative measurement system has evolved.

This move to quantification of measurement began in earnest in the 1970s, in particular, with the revision of the Federal Interagency Day Care Regulations (FIDCR). The notion of an instrument based program monitoring or licensing system began to be examined by licensing agencies. Checklists and rating scales were employed, with checklists being used predominantly because of the nature of regulatory compliance. However, a few states, provinces and cities utilized rating scales to measure compliance with rules. More will be said about the differences between checklists and rating scales.

By the early 1980s with severe federal cutbacks in funding, licensing administrators found themselves with an increasing number of facilities to license but fewer funds to perform the investigative function. In response to this concern, the indicator checklist methodology was created which utilized a shortened version of the comprehensive checklist approach used by many states. Indicator systems have been developing over the past two decades and in many states are key components of their monitoring and licensing functions. The indicator system is only one form of what is known in the licensing literature as inferential inspections. However, only the indicator system will be addressed in this chapter because the other types of inferential inspections are not valid and reliable enough to meet the criteria for scientifically based measurement tools.
INTRODUCTION

A related but very different technique that complements indicator systems is the use of weighting systems to determine the relative risk of specific rules related to non-compliance. The reason for the development of weighting systems is the nature of regulatory compliance data. Because compliance data measure minimum health, safety and well-being rules, the data are highly skewed with very little variance. The use of weighting systems helps to increase the amount of variance in the regulatory data sets.

The indicator and weighting systems have not been limited to licensing systems but have also been developed for other program quality endeavors such as accreditation and national standards setting.

A very recent development, in the 1990s, is the development and use of outcome based systems for licensing. This is where a licensing agency places more emphasis on outcomes rather than processes. This is a very experimental and controversial development, particularly for the field of human care licensing.
DEFINITIONS

**Instrument Based Program Monitoring**

A movement within licensing and regulatory administration from qualitative measurement to a very quantitative form of measurement that includes the use of checklists.

**Indicator System**

A licensing measurement system utilizing a shortened version of a comprehensive checklist measuring compliance with rules through a statistical methodology. Only key predictor rules are included on an indicator checklist. It is a form of inferential inspections where only a portion of the full set of rules is measured.

**Inferential Inspections**

An abbreviated inspection utilizing a select set of rules to be reviewed. An indicator system, weighting of rules for determining a shortened inspection tool, a random selection of rules, etc. are examples of inferential inspections. The use of inferential inspections by licensing agencies was developed as a time saving technique and a technique to focus regulatory efforts on facilities that required additional inspections or technical assistance.

**Checklist**

A simple measurement tool that measures compliance with state rules in a yes/no format. Either the facility is in compliance with rules or not in compliance. Generally, there is no partial compliance with checklists generally.
## DEFINITIONS

### Rating Scale

A more complex measurement tool in which a Likert type of rating is employed—going from more to less, or high to low. A rating scale is always used in the development of weighting systems. It is not used in measuring compliance with rules. However, rating scales are used widely in other types of program quality assessment systems—accreditation and research tools.

### Weighting System

A Likert type of measurement tool that utilizes a modified Delphi technique to determine the relative risk to individuals if there are violations with specific rules. Weighting systems are developed by sending a survey to a selected sample of persons in order for them to rank the relative risk of violation with specific rules.

### Outcome Based Systems

A measurement system based upon outcomes, not processes. A facility would be assessed by the outcomes it produced with individuals. For example, the number of consumers (children or adults) developing normally, free from abuse, not in placement, involved actively in the community, etc. are outcome based measures.
Instrument Based Program Monitoring (IPM) is a particular approach to measurement and assessment. It is in contrast to a more qualitative type of assessment (case study is an example of this type of assessment). IPM is very quantitative and is characterized by the use of checklists (see the next section for a discussion of checklists). The advantages of instrument based program monitoring are the following: cost savings, improved program performance, improved regulatory climate, improved information for policy and financial decisions and ability to make state/province comparisons.

IPM is a paradigm shift in conducting licensing inspections and licensing of facilities. It is an approach that lends itself to automation, it is objective and it is generally systems-oriented. The IPM approach came into its own in the 1970s and has been used predominantly since then as the primary licensing measurement tool. Some individuals have argued that the IPM approach is not as effective as the more qualitative, narrative case study approach although they can’t argue with its efficiency. A combination of IPM (quantitative approach) with a qualitative approach is probably most effective; however, this is very time consuming and a luxury that most state/province licensing agencies do not have, with more and more facilities to license and fewer and fewer staff to do the licensing.
CHECKLISTS

Checklists are the predominant means of collecting licensing data. It simplifies the process, making it very quantifiable. This is one of its strengths, but along with this simplification, a drawback is that some of the richness of the description of a particular facility is lost.

There are particular steps that need to be followed in the development of the checklist. Licensing administrators need to follow this four step process:

1) Make interpretations of the rules part of the overall manual for measurement of the comprehensive set of rules.

2) Identify the rules to be included in the checklist.

3) Consider the organization of the checklist—the flow of the investigation to the facility.

4) Decide what type of record keeping will be used—NCR paper, notebook computer in the field, etc.
RATING SCALES

Rating scales will not be discussed in detail because their applicability to licensing measurement is rather limited. Only in cases where a licensing administrator was interested in some form of partial compliance would rating scales make sense. The NAEYC (National Association for the Education of Young Children) accreditation system is one example of the use of a rating scale of full, partial or non-compliance with accreditation standards. While a partial compliance rating may be useful in accreditation standard measurement, it is generally not appropriate for use in licensing rule measurement.

Most licensing agencies do not use partial compliance, and the movement within the regulatory administration field is to consider partial compliance as being equivalent to non-compliance. Either a facility meets the rule or does not meet the rule. There is no middle ground.
WEIGHTING SYSTEMS

Weighting systems and licensing indicator systems that are described in the next section of this chapter are enhancements of the basic checklist (instrument based program monitoring) system. Weighting systems are used to increase the amount of variance in licensing compliance data. Because licensing data are nominal data (‘yes’ or ‘no’ compliance) and are generally highly in compliance, there is little variance in the data set from any particular set of rules. In order to increase the variance in data, weighting systems are used so that each rule does not have an equal weight. If you do not weight rules, by default, you have given an equal weight to each rule.

The remainder of this section describes the process for developing a licensing weighting system for use in the implementation of human care licensing rules, displays data from states that have used this approach and discusses the applicability of weighting systems for all types of human service licensing.

A licensing weighting system is a regulatory administration tool designed for use in implementing human care licensing rules. A licensing weighting system assigns a numerical score or weight to each individual licensing rule or section of a rule, based upon the relative health, safety and welfare risk to the consumers if a facility is not in compliance with the rule. The type of license issued is based on the sum of the numerical weights for each rule that is not in compliance.

The specific objectives of a licensing weighting system are:

a) To standardize decision-making about the type of license to be issued

b) To take into account the relative importance of each individual rule

c) To ensure that rules are enforced consistently

d) To improve the protection of consumers through more equitable and efficient application and enforcement of the licensing rules
WEIGHTING SYSTEMS

A licensing weighting system can and should be developed and implemented only if:

1) Regular or full licenses are issued with less than 100% compliance with rules. If a regular license is not issued unless all violations are corrected at the time of license issuance, a weighting system is not necessary. A weighting system is useful if a facility is issued a license with outstanding violations (and a plan to correct the non-compliance areas) at the time of license issuance.

2) There is a large number of licensing rules with a variation of degrees of risk associated with various rules. If there are only a few rules with equal or similar risk associated with each rule, a weighting system is not necessary. A weighting system is useful if there are many rules with varying degrees of risk.

3) A standardized measurement system or inspection instrument is used to measure compliance with licensing rules. Before developing a weighting system, a standardized measurement instrument or tool should be developed and implemented.
Development of a Weighting System

This section will provide a step-by-step process in the development of a weighting system for licensing agency use.

1) The first step in developing a licensing weighting system is the development of a survey instrument. A licensing inspection instrument or measurement tool can be adapted into a survey tool. The survey should contain each rule or section of a rule, according to how it is measured in the inspection instrument. Survey instructions should explain the purpose of the survey and instructions for completing the survey instrument. It is suggested that survey participants rate each rule section from 1-8 based on risk to the health, safety and welfare of the clients if the rule is not met (1 = least risk; 8 = most risk).

The survey participant should be instructed to circle their rating choice of 1, 2, 3, 4, 5, 6, 7 or 8. An example of a survey question is:

Interior stairways, outside steps, porches and ramps shall have well-secured handrails.

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low Risk</td>
<td>High Risk</td>
<td></td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

2) Surveys should be disseminated to at least 100 individuals. If a state has more than 3,000 licensed facilities in the type of service being surveyed, consideration for surveying more than 100 individuals should be given.

Individuals surveyed should include providers of service; provider, consumer and advocacy associations; health, sanitation, fire safety, medical, nutrition and program area professionals; licensing agency staff including policy/administrative staff and inspectors; consumers of service; and funding agency staff. In order to assure a higher survey return rate, persons selected as survey participants should be contacted prior to the survey to explain the weighting system and request their willingness to complete a survey. (See Karen Kroh’s paper for detailed graphics of Pennsylvania’s survey distribution.)
3) Survey results from each survey should be collected and entered into a computer data base spreadsheet software package. After all survey data are recorded, means or average weights for each rule or section of a rule should be calculated using SPSS—Statistical Package for the Social Sciences or SAS—Statistical Analysis System. (For detailed information on the statistical methodology employed in the development of weighting systems, see Griffin and Fiene’s *A systematic approach to child care regulatory review, policy Development of a Weighting System evaluation and planning to promote health and safety of children in child care: A manual for state and local child care and maternal and child health agency staff*.)

If there is sufficient variation in the means for each rule, the individual rule means can be rounded to the nearest whole number. Generally when comparing mean weights among the various groups surveyed there should be a similarity in rating among the groups, supporting the use of the weights as a reliable measure of risk.

4) The next step is to either (a) pilot test the weights with new licensing data for about six months or (b) apply the weights to at least 25% of historical data from the previous 12 months.

The intent of the pilot application is to collect data to use as the database for determining statistical cut-off points for the issuance of specific types of licenses or for administration of various negative sanctions.

A total weighted score for each facility based upon the combined weights of all violations should be calculated. Following is an example of how the scores should be calculated:

<table>
<thead>
<tr>
<th>RULE VIOLATIONS</th>
<th>WEIGHTS</th>
</tr>
</thead>
<tbody>
<tr>
<td># 1</td>
<td>7</td>
</tr>
<tr>
<td># 2</td>
<td>6</td>
</tr>
<tr>
<td># 3</td>
<td>+8</td>
</tr>
</tbody>
</table>

Sum of Weights = 21
Under the above example a perfect compliance score with non-compliance areas would be a score of “0”. The higher the score, the lower the compliance would be. However, this is not congruent with the common usage of scores in which the higher score is associated with better compliance. In order to accommodate our familiarity with higher scores for the better facilities, the weighted score should be deducted from an arbitrary constant score of “100”. Thus a weighted non-compliance score of “20” will convert to a positive score of “80”. A facility with no violations will have a perfect score of “100”. This is more intuitive to individuals as they think about scores and measurement.

Using the previous example, the final weighted score would be computed as follows:

<table>
<thead>
<tr>
<th>RULE VIOLATIONS</th>
<th>WEIGHTS</th>
</tr>
</thead>
<tbody>
<tr>
<td># 1</td>
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</tr>
<tr>
<td># 2</td>
<td>6</td>
</tr>
<tr>
<td># 3</td>
<td>+8</td>
</tr>
</tbody>
</table>

Sum of Weights = 21

Final calculation:

100
-21
79
5) The fifth step in the process is to compute and apply the standard deviation or the median if the data are very skewed.

The mean and standard deviation of all final weighted scores computed in the pilot application in step #4 should then be calculated. Based upon experience with implementing licensing weighting systems, it is recommended that if a final weighted score is no more than one standard deviation below the mean, a regular license should be issued. If a score is between one standard deviation below the mean and two standard deviations below the mean, a provisional license should be issued (the length of the provisional license will vary based upon the severity of the non-compliance), or intermediate negative sanctions should be administered. If a score is less than two standard deviations below the mean, no license should be issued or a more severe negative sanction should be administered.

For example, if the standard deviation is 18 and the mean is 88, following is the distribution of the weighted scores used to determine the type of license to be issued:

- **Score of 100 — 70** = Regular license/no sanction
- **Score of 69 — 52** = Provisional license/intermediate sanction such as warnings, administrative fines or restriction on admissions
- **Score of 51 and below** = No license/severe sanction such as revocation or administrative closure

6) The final weighted scores from the pilot application should be applied to the standard deviation cut-off points to determine the type of license or negative sanction issued. These data should be studied to compare types of licenses or sanctions issued under pre-weighting vs weighting.
7) Before implementing the licensing weighting system the following additional licensing factors should be considered and incorporated as necessary into the licensing system.
   a) repeated violations from the previous licensing inspection;
   b) violation with high risk items (possibly a weight of 8.0 or above);
   c) discretion of licensing inspector to recommend variance from licensing weighting system.

8) Whenever licensing rules are amended, or at least every 5 years, the weights should be recomputed and the weighting system re-evaluated.

The licensing weighting system as described here can be used to license any type of human care facility including child care, adult care, residential care and part-day care facilities. Licensing weighting systems have been developed in Pennsylvania, Utah, Florida and Georgia.

Since the concept, development and implementation of weighting systems is relatively new to the field of licensing, the long term impact and benefits of weighting systems have not been fully realized. The potential of using weighting systems and modifications of weighting, to help standardize the implementation and enforcement of licensing rules is an exciting area of research to pursue in the field of regulatory administration.
As mentioned in the weighting system section of this chapter, indicator checklists or licensing indicator systems are used to improve upon instrument based program monitoring (checklist) systems. The licensing indicator system is one method of assuring compliance with licensing rules in a time efficient manner. The concept has been developed and successfully implemented in several states and for different human service types. The licensing indicator system was originally developed in Pennsylvania in 1977 for use in licensing child care centers. The original intent was to develop an abbreviated licensing instrument in order to refocus licensing investigation time to assess and assist in quality enhancement activities.

From 1980-1984, the US Department of Health and Human Services funded a project to study and further develop a licensing indicator system for child care facilities on a national level. The federally funded project, known as the Children’s Services Monitoring Transfer Consortium, organized researchers, state licensing administrators and professional staff from Pennsylvania, Michigan, West Virginia, Texas, New York City and California to review and refine the existing Pennsylvania system for possible use by other states.

The licensing indicator system is now used to assist in licensing human care facilities in Pennsylvania, West Virginia, Texas, Maryland, Utah, Florida, Delaware, Georgia, Washington, Minnesota and California.

The purpose of a licensing indicator system is to increase the efficiency and effectiveness of an existing licensing system by refocusing the emphasis of the licensing process. A licensing indicator system is intended to complement, and not replace, an existing licensing measurement system. Through use of the licensing indicator system, less time is spent conducting annual inspections of facilities with a history of high compliance with the licensing rules, and more time is spent a) providing technical assistance to help facilities comply with licensing rules and b) conducting additional inspections of facilities and agencies with low compliance with licensing rules.
The licensing indicator system is actually a shortened version of a comprehensive licensing inspection instrument. A small number of rules are selected based upon a statistical methodology designed for this specific purpose. The licensing indicator system uses a measurement tool, designed to measure compliance with a small number of rules, that predicts high compliance with all the rules. If a facility is in complete compliance with all of the rules measured in the licensing indicator system, high compliance with all the rules is statistically predicted. It is critical to understand that the rules for the licensing indicator system are selected statistically (the statistical technique is called the phi-coefficient and generally is set at a $p$ value of .01 or higher) and not based upon value judgement (arbitrary assignment, no basis from research literature), risk assessment or frequent rule violations. The rules are selected based upon an SPSSPC+ computer software package that compares violations of facilities with high compliance versus facilities with low compliance. The rules that are most often out of compliance in low compliance facilities and in compliance in high compliance facilities will be the indicator or predictor rules.

**Prerequisites for implementing a licensing indicator system**

Before developing and implementing a licensing indicator system it is important that the existing licensing system is comprehensive and well established. The following are prerequisites to implementation of an indicator system:

1) Licensing rules must be comprehensive, well written and measurable. Rules are the building blocks for any licensing system. If the rules are not well written and measurable a licensing indicator system should not be pursued. Also, if the total number of rules is small, a shortened inspection tool is not valuable.
LICENSING INDICATOR SYSTEMS

2) There must be a measurement tool designed to standardize the application and interpretation of the rules. A licensing inspection instrument designed to assure statewide consistency in the application of the rules is essential prior to implementing a licensing indicator system.

3) There should be a licensing weighting system designed to assess the relative risk to consumers if the rule is not met. This system may be a formal weighting system or a simple classification system which categorizes rules by degree of risk. An example of a high degree of risk to consumers would be the accessibility of heat sources or toxins. Having a signature in a record is an example of a low degree of risk to consumers.

4) At least one year of data on rule violations for individual facilities. These data are needed to enter into the computer software system in order to determine the rules that are the indicators or predictors of high compliance.
How to develop a licensing indicator system

The basic steps to developing a licensing indicator system include:

1) Select facilities to be used in determining the indicators. If the total number of licensed facilities is less than 200, all 200 facilities can be used. If the total number of licensed facilities exceeds 200, sampling must be done. Generally, a sample of 100 facilities or 10% is acceptable. When selecting the sample, variables of size of facilities, geographic area, urban/rural, profit/non-profit, public/private and varied compliance levels or scores must be controlled.

2) Violation data for the sampled facilities is entered into a computer software system designed for this purpose (SPSSPC+ is recommended—consult with NARA consultant Dr. Richard Fiene for the necessary syntax and computer coding for doing the analyses).

3) A list of indicator or predictor rules, based on phi coefficients, that were the best indicators of high compliance will be calculated by the computer software system. These are the rules that are most often out of compliance in low compliance facilities and in compliance in high compliance facilities.
4) A small number of additional rules which are determined based on a licensing weighting system or relative risk are added to the statistically selected indicators. The purpose of this step is to assure face validity of the instrument. By adding a smaller number of carefully selected high-risk rules to the instrument, the licensing agency can be assured that critical rules are always measured.

5) In order to assure that full compliance with all the rules is maintained, five items selected at random should also be applied as part of the licensing indicator system. The final licensing indicator system instrument contains the indicator rules, high-risk rules and random rules. The total number of rules on an indicator checklist will vary, but will range from 20-45 items.

6) Specific criteria for use of the licensing indicator system are developed.
Criteria for use of the licensing indicator system

The development of very specific criteria for use of the licensing indicator system is perhaps the most critical step of the design process. This is the step at which the determinations are made as to when the licensing indicator system will be used. The determination of use of the system should be standardized and not based upon licensing inspector discretion.

Each licensing agency must develop its own criteria based upon its own historical licensing data and experience. Following are some criteria that may be useful:

1) The facility has had a full or regular license and no negative sanctions have been administered, within the previous two (2) years.

2) The facility has had a score or percentage of compliance above a specified threshold for the previous year.

3) All previous violations have been corrected according to the facility’s plan of correction.

4) No significant validated complaints have been found within the past year.

5) The total number of consumers served has not increased by more than a specified percentage during the past year.

6) There has not been significant staff turnover at the facility/agency within the past year. This may be targeted to certain levels of staff turnover, such as direct care staff or facility directors, depending on which staff are particularly key for program stability.

7) A full inspection using the comprehensive licensing measurement instrument must be done at least every three (3) years.
Revision of the licensing indicator system

The licensing indicator system should be continually reevaluated for its effectiveness. The system should be completely revised at least every three years or upon a revision of the rules. In order to achieve the intended purpose of the licensing indicator system of refocusing the emphasis of licensing effort from facilities with high compliance to facilities with low compliance, constant review, evaluation and revision of the licensing indicator system is essential.

Other types of inferential inspection systems, of which the licensing indicator system is only one, will not be addressed in this chapter because inferential systems other than the licensing indicator system have not been determined to be statistically valid or reliable. As licensing administrators may potentially need to defend their actions in a court of law, it is essential that the methodology or technique utilized is scientifically sound. When it comes to inferential inspections only those instruments based upon an indicator or weighting methodology can stand up to this rigorous testing.
OUTCOME BASED SYSTEMS

This is a relatively new phenomenon in the licensing and regulatory administration field. The emphasis in this new approach is to examine outcomes rather than processes. What are the ultimate outcomes for individuals? Determine this and the argument goes—there is no need to measure processes directly.

Outcome measurement is appealing in many respects. It does focus on results, something the human services field was short on demonstrating in the 1990s. However, there is a fallacy in this approach. Results are the end product, but we always have a process to get to the end product.

Another issue is that the purpose of licensing is to prevent harm to consumers. A purely outcome-based system would potentially harm consumers who were in the facilities later determined to “fail” the outcome test. Moreover, there are two other problems:

1. Insufficient (political) agreement on what are acceptable outcomes.

2. Some outcomes will not manifest for years and/or are contaminated by other variables related to other influences on later behavior.

What makes more sense is to tie outcomes to specific regulatory processes that appear to be in a causal or at least a correlational relationship. If licensing agencies were able to clearly link specific results (outcomes) to specific rules (processes), there would be the empirical ability to focus only on those rules that produced positive results for consumers and families and eliminate all other unnecessary rules that do not produce positive outcomes for consumers and families. Specific studies could be conducted and in fact have already been conducted by university researchers. In child care, for example, low staff:child ratios, pre-service and in-service training of staff, highly qualified staff and small group size are all examples of regulatory variables that have been identified as surrogates to program quality that produce positive outcomes for children.

Outcome based or results-oriented systems will impact licensing, but the research literature demonstrates how licensing agencies can clearly link outcomes to regulatory processes that produce the outcomes. This becomes a powerful argument to legislators when this roadmap of process to outcome can be provided.
RELATIONSHIP BETWEEN RULES AND INSTRUMENTS

This section is included because this is one area that gets many licensing administrators into trouble. Not enough time is spent on making sure that the instruments developed are the exact reflection of the rules. This is where the interpretive rules that are part of any measurement instrument that accompanies the actual instrument should be placed. This helps to increase the reliability of the instrument and doesn’t hurt the overall validity of the tool either (more on reliability and validity in the next section). Readers should refer to Chapter 2, The Formulation of Rules, for additional information on the definition and development of interpretive and substantive rules.

When there is not a close link between instrument development and rule formulation this only leads to headaches for licensing agencies. It may take years and not be evident until you get called into a court of law to defend your licensing system but it will happen.

The analogy of playing Russian Roulette may be useful. As licensing administrators, you are never 100% certain that all your facilities are compliant with all the rules. However, there are certain management procedures and processes that you can put in place to help. A clear link between rules and measurement tools is one of them. Since you are never 100% sure of full compliance (in other words all six chambers of the revolver are not empty—if they were, you wouldn’t have Russian Roulette), you must make difficult decisions related to increasing or decreasing your chances in playing Russian Roulette. So you have the choice of having the management and procedural safeguards built in (one or two bullets in the revolver) or you don’t build in the procedural safeguards (four or five bullets in the revolver). It is obvious statistically where your chances are greater in surviving a potential mishap in a licensing system.
The two concepts of **reliability and validity** are so critical to measurement, but are so often overlooked in the development of licensing measurement systems. In fact, it has been estimated that as many as 30 states may be using a type of inferential inspection. But only 1/3 of these states has followed the rigorous statistical methodology as outlined in the Licensing Indicator System section.

**Validity and Reliability**

Very simply, **validity** deals with content of the particular tool or instrument—does it serve the purpose for which it is to be used? Does it measure the rules accurately? Usually the answer to this question is easier for licensing administrators to answer. Since licensing measurement tools should be directly based upon rules, as explained in the previous section, there should not be much difficulty in establishing validity. When the tools are not based on the rules, that is when validity can be and should be called into question.
**RELIABILITY AND VALIDITY**

**Reliability** deals with the administration of the tool or instrument. Does it measure the rules consistently and in an objective manner? The answer to this question is much more difficult for licensing administrators to answer affirmatively. This poses real problems if each administration of the licensing tool is not consistent and objective. Facilities will not have the rules applied in an equal and fair manner.

Reliability testing should be done methodologically and scientifically. Interrater reliability should be established for the tools/checklists that are to be used in the field by licensing field staff. This is a process that has been well documented in the psychological research. This has not been the case within licensing and regulatory administration. Generally checklists are designed quickly and are never tested for reliability. This creates a problem that many of us have heard—the rules are not applied uniformly across the state/province. The reason is that the tool that is used to measure compliance is not reliable.

In order to establish reliability, licensing inspectors need to go out to facilities in pairs assessing the same facility at the same time. They then need to compare their results. Do they agree on what is in compliance and out of compliance at the particular facility? If there is not at least 90% agreement for each rule then additional interpretation of that specific rule is needed. Establishing reliability is not overly difficult nor overly time consuming; however, it will add a bit more time before staff are really ready to begin to license facilities (90% agreement on each rule and interpretative rule).
An interesting development in the past five years has been the emphasis on program quality as a result of pressure from consumers, families, advocates and the general public. Consumers and other interested persons are requesting licensing agencies to ensure not only the health, safety and well-being of individuals served in facilities, but also to be concerned advocates for the overall quality of services provided at these facilities.

This increased emphasis and concern for program quality is a difficult area to address for licensing agencies. The resources to complete program quality reviews and to advocate for quality within government are not commensurate with the expectations. However, there are some strategies that can be employed to assist licensing agencies. The first and foremost will be to save time on doing licensing inspections. The indicator system described in this chapter will provide such a tool for saving time. Studies conducted over the past two decades indicate that utilizing an indicator checklist approach saves up to 50% in the on-site inspection time.

The time saved in doing licensing inspections should be used to either:

a) Conduct additional licensing inspections in new or problem facilities

b) Provide technical assistance

c) Complete program quality reviews

This could be done by utilizing a tool from accreditation in observing classrooms, or utilizing a program quality tool from the research literature (for example, Early Childhood Environment Rating Scale). Licensing administrators need to be certain that they have a plan to utilize this extra time or the worst fears of licensing professionals could occur. Two potential scenarios could play out. One is that the time is used to do more and more licensing inspections utilizing the indicator system on more and more facilities. The worst scenario is that staffs are cut. If a state/province can complete all its inspections in half the time, then doesn’t it follow that only half the staff is needed? With a clearly articulated plan on how the licensing and program quality reviews will produce higher quality programs should help to prevent this cost cutting approach. However, this is always a fear that licensing administrators must face.
CONCLUSION

This *NARA Licensing Curriculum* chapter provides a brief overview to the major issues confronting licensing administrators when they consider licensing tools and measurement systems. The emphasis upon quantitative systems was reflected in this chapter because of the need to develop cost effective and efficient licensing systems as the number of facilities continues to grow with shrinking resources. Also there is a compounding effect with higher expectations on licensing agencies to be concerned more about program quality.

The chapter showed the various types of measurement tools that apply to licensing and regulatory administration. It is clear that given the nature of licensing there are certain tools more suited than others, such as checklists versus rating scales. A very detailed description of both licensing weighting and indicator systems was provided. The reason for this emphasis is that these are two very valid and reliable tools that can be used by licensing administrators in making their agencies more effective and efficient. The licensing measurement field is changing constantly as new approaches are introduced. For example, within the program evaluation field there is a move to have a better balance between quantitative and qualitative analyses. It will not be long before this initiative has its impact on the licensing measurement field as well.
REFERENCES


Preface

This paper was originally written in 2000 as a chapter in the NARA Licensing Curriculum dealing with the subject of licensing tools and systems. Since then, many changes and refinements have occurred in the human services regulatory administration field related to measurement and program monitoring. This paper will address many of these updates within the context of the original NARA Licensing Curriculum chapter since many of those original concepts are still relevant today.

Since 2000, several original results related to regulatory compliance have been supported and enhancements to what was called inferential inspections and now is called differential monitoring have occurred. We have continued to see that key indicator/predictor rules have remained very constant over the past 15 years. The original 13 key indicators of licensing and quality have not changed a great deal – 10 of the original 13 are still present. An important question is, why is this the case, for example why is compliance with a rule related to proper immunization of children a key predictor rule discriminating between high and low overall compliant programs.

Another result that has held up over the years is the non-linear relationship between program compliance and program quality. This continues to be a controversial and troubling relationship from a public policy point of view.

Other areas that need further development is for validation studies to make certain that differential monitoring, risk assessment and key indicators work as intended. There is substantial anecdotal evidence but a solid empirical base needs to be established for these various licensing and monitoring system methodologies.
**Introduction**

Measurement within licensing and regulatory administration has changed dramatically over the past 40 years. In the 1970s it was more qualitative in nature rather than its quantitative nature today. The qualitative nature was depicted with long narratives obtained from in-depth observations and interviews that described a facility in detail with a listing of violations with specific rules. The observations used a running record format in which a detailed accounting of the facility was obtained. This qualitative system worked well when there were few facilities to be assessed. However, as the number of human care facilities increased and licensing agency administrators felt a greater need to understand compliance trends, movement to a more quantitative measurement system evolved.

This move to quantification of measurement began in earnest in the 1970’s. The notion of an instrument based program monitoring or licensing system began to be examined by licensing agencies. Checklists and rating scales were employed, with checklists being used predominantly because of the nature of regulatory compliance, an all or none phenomenon. However, a few states, provinces and cities have considered the use of rating scales to measure compliance with rules. More will be said about the differences between checklists and rating scales later.

By the early 1980s with severe federal cutbacks in funding, licensing administrators found themselves with an increasing number of facilities to license but fewer funds to perform these program monitoring and investigative functions. In response to this concern, more streamlined or abbreviated program monitoring systems were developed utilizing a differential monitoring format, such as the key indicator or indicator checklist methodology which utilized a shortened version of the comprehensive checklist approach used by many states. Key indicator systems have been developing over the past 40 years and in many states are key components of their monitoring and licensing functions as they form a basis for risk assessment regulatory analyses. The key indicator system along with risk assessment systems are two forms of what is known in the human service licensing/regulatory administration literature as differential monitoring inspections. For the interested reader, two federally produced publications, a white paper on program monitoring innovations published by the Assistant Secretary’s Office for Planning and Evaluation and a licensing brief on differential monitoring, risk assessment, and key indicators published by the Office of Child Care in the Administration for Children and Families are highly recommended. These two resources are cited in the resource section at the end of this document.
A related but very different technique that complements key indicator systems is the use of weighting or risk assessment systems to determine the relative risk for morbidity or mortality of specific rules related to non-compliance. The original reason for the development of weighting/risk assessment systems is the nature of regulatory compliance data. Because compliance data measure minimum health, safety and well-being rules, the data are highly skewed with very little variance. The use of risk assessment systems was to help to increase the amount of variance in the regulatory data sets. However, risk assessment systems over the past 40 years have taken on a life of their own and are used by many states as stand-alone abbreviated differential program monitoring systems. It is estimated that more states employ a risk assessment approach rather than a key indicator approach when applying differential monitoring.

The key indicator and risk assessment systems have not been limited to licensing and regulatory administration systems but have also been developed and used for other program quality endeavors, such as accreditation, quality rating and improvement systems, national and international standards setting.

**Definitions**

*Instrument based program monitoring* – a movement within licensing and regulatory administration from qualitative measurement to a very quantitative form of measurement that includes the use of checklists. This move to more quantitative has been encouraged as more and more states develop electronic data systems.

*Key indicator system* – a licensing measurement system utilizing a shortened or abbreviated version of a comprehensive checklist measuring compliance with rules through a statistical methodology. Only key predictor rules are included on an indicator checklist. It is a form of differential monitoring or inferential inspections where only a portion of the full set of rules is measured.

*Differential monitoring/inferential inspections* – an abbreviated inspection utilizing a select set of rules to be reviewed. A key indicator system or a risk assessment system are two examples of differential monitoring approaches. The use of differential monitoring/inferential inspections by licensing agencies was developed as a time saving technique and a technique to focus regulatory efforts on facilities that required additional inspections or technical assistance.

*Checklist* is a simple measurement tool that measures compliance with state rules in a yes/no nominal format. Either the facility is in compliance with rules or not in compliance. Generally, there is no partial compliance with checklists. Having regulatory compliance data being at a nominal measurement level creates limitations statistically in the types of tests that can be completed.
Rating scale is a more complex measurement tool in which a Likert type of rating is employed going from more to less or high to low. A rating scale is always used in the development of weighting/risk assessment systems. It is not used in measuring compliance with rules or at least it hasn’t been used in the past.

Risk Assessment/Weighting system is a Likert type of measurement that utilizes a modified Delphi technique to determine the relative risk to individuals if there are violations with specific rules. Risk assessment/weighting systems are developed by sending a survey to a selected sample of persons/stakeholders in order for them to rank the relative risk of violation with specific rules.

Outcome based systems are measurement systems based upon outcomes, not processes. A facility would be assessed by the outcomes it produced with individuals. For example, the number of consumers (children or adults) developing normally, free from abuse, not in placement, involved actively in the community, properly immunized, free from injuries, etc. are outcome based measures.

Instrument Based Program Monitoring

Instrument based Program Monitoring (IPM) is a particular approach to measurement and assessment. It is in contrast to a more qualitative type of assessment (case study is an example of this type of assessment). IPM is very quantitative and is characterized by the use of checklists (see the next section for a discussion of checklists). The advantages of instrument based program monitoring are the following: cost savings, improved program performance, improved regulatory climate, improved information for policy and financial decisions and the ability to make state/province comparisons.

IPM was a paradigm shift in conducting licensing inspections and licensing of facilities when it was first introduced in the late 1970s – early 1980s. More recently it has come under scrutiny to see if a more balanced approach employing a combination of quantitative and qualitative tools is more appropriate. With that said, IPM is an approach that lends itself to automation, it is objective and it is generally systems-oriented. The IPM approach came into its own in the 1970s and has been used predominantly since then as the primary licensing measurement approach. As stated, some state administrators have argued that the IPM approach is not as effective as the more qualitative, narrative case study approach although they can’t argue with its efficiency. A combination of IPM (quantitative approach) with a qualitative approach is probably most effective; however, this is very time consuming and a luxury that most state/province licensing agencies do not have, with more and more facilities to license and fewer and fewer staff to do the licensing.
Checklists

Checklists are the predominant means of collecting licensing data. It simplifies the process, making it very quantifiable. This is one of its strengths, but along with this simplification, a drawback is that some of the richness of the description of a particular facility is lost.

There are particular steps that need to be followed in the development of the checklist. Licensing administrators need to follow this four step process:

1) Make interpretations of the rules part of the overall manual for measurement of the comprehensive set of rules.
2) Identify the rules to be included in the checklist.
3) Consider the organization of the checklist – the flow of the investigation to the facility.
4) Decide what type of record keeping will be used – paper, tablet, laptop, et

Rating Scales

Rating scales will not be discussed in detail because their applicability to licensing measurement is rather limited. Only in cases where a licensing administrator was interested in some form of partial compliance would rating scales make sense. The NAEYC (National Association for the Education of Young Children) accreditation system is one example of the use of a rating scale of full, partial or non-compliance with accreditation standards. Many QRIS (Quality Rating and Improvement Systems) use rating scales through the ERS (Environment Rating Scales). While a partial compliance rating may be useful in accreditation standard measurement, it is generally not appropriate for use in licensing rule measurement.

Most licensing agencies do not use partial compliance, and the movement within the regulatory administration field is to consider partial compliance as being equivalent to non-compliance. Either a facility meets the rule or does not meet the rule. There is no middle ground.

Weighting/Risk Assessment Systems

Weighting/risk assessment systems and licensing indicator systems that are described in the next section are enhancements of the basic checklist (instrument based program monitoring) system. Weighting/risk assessment systems are used to increase the amount of various in licensing compliance data. Because licensing data are nominal data (‘yes’ or ‘no’ compliance) and are generally highly in compliance, there is little variance in the data set from any particular set of rules. In order to increase the variance in data, weighting/risk assessment are used so
that each rule does not have an equal weight. If you do not weight rules, by default, you have given an equal weight to each rule.

The remainder of this section describes the process for developing a licensing weighting/risk assessment system for use in the implementation of human care licensing rules, displays data from states that have used this approach and discusses the applicability of weighting/risk assessment system for all types of human service licensing.

A licensing weighting/risk assessment system is a regulatory administration tool designed for use in implementing human care licensing rules. A licensing weighting/risk assessment system assigns a numerical score or weight to each individual licensing rule or section of a rule, based upon the relative health, safety and welfare risk to the consumers if a facility is not in compliance with the rule. The type of license issued is based on the sum of the numerical weights for each rule that is not in compliance.

The specific objectives of a licensing weighting/risk assessment system are:

a) To standardize decision-making about the type of license to be issued
b) To take into account the relative importance of each individual rule
c) To ensure that rules are enforced consistently
d) To improve the protection of consumers through more equitable and efficient application and enforcement of the licensing rules

A licensing weighting/risk assessment system can and should be developed and implemented only if:

1) Regular or full licenses are issued with less than 100% compliance with all rules. If a regular license is not issued unless all violations are corrected at the time of license issuance, a weighting/risk assessment system is not necessary. A weighting/risk assessment system is useful if a facility is issued a license with outstanding violations (and a plan to correct the non-compliance areas) at the time of license issuance.

2) There is a large number of licensing rules with a variation of degrees of risk associated with various rules. If there are only a few rules with equal or similar risk associated with each rule, a weighting/risk assessment system is not necessary. A weighting/risk assessment system is useful if there are many rules with varying degrees of risk.

3) A standardized measurement system or inspection instrument is used to measure compliance with licensing rules. Before developing a weighting/risk assessment system, a standardized measurement instrument or tool should be developed and implemented.
Development of a Weighting/Risk Assessment System

This section will provide a step-by-step process in the development of a weighting/risk assessment system for licensing agency use.

1) The first step in developing a licensing weighting/risk assessment system is the development of a survey instrument. A licensing inspection instrument or measurement tool can be adapted into a survey tool…the survey should contain each rule or section of a rule, according to how it is measure in the inspection instrument. Survey instructions should explain the purpose of the survey and instructions for completing the survey instrument. It is suggested that survey participants rate each rule section from 1-8 based on risk to the health, safety and welfare of the clients if the rule is not met (1 = least risk; 8 = most risk). The survey participant should be instructed to circle their rating choice of 1, 2, 3, 4, 5, 6, 7, 8. An example of a survey question is:

Interior stairways, outside steps, porches and ramps shall have well-secured handrails.

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<td>4</td>
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<td>6</td>
<td>7</td>
<td>8</td>
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<tr>
<td>Low Risk</td>
<td>High Risk</td>
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2) Surveys should be disseminated to at least 100 individuals. If a state has more than 3,000 licensed facilities in the type of service being surveyed, consideration for surveying more than 100 individuals should be given. Individuals surveyed should include providers of service; provider, consumer and advocacy associations; health, sanitation, fire safety, medical, nutrition and program area professionals; licensing agency staff including policy/administrative staff and inspectors; consumers of service; parents; and funding agency staff. In order to assure a higher survey return rate, persons selected as survey participants should be contacted prior to the survey to explain the weighting/risk assessment system and request their willingness to complete the survey.

3) Survey results from each survey should be collected and entered into a computer data base spreadsheet software package or an online survey software. After all survey data are recorded, means or average weights for each rule or section of a rule should be calculated. If there is sufficient variation in the means for each rule, the individual rule means can be rounded to the nearest whole number. Generally when comparing mean
weights among the various groups surveyed there should be a similarity in rating among the groups, supporting the use of the weights as a reliable measure of risk.

4) The next step is to either (a) pilot test the weights with new licensing data for about six months, or (b) apply the weights to at least 25% of historical data from the previous 12 months. The intent of the pilot application is to collect data to use as the database for determining statistical cut-off points for the issuance of specific types of licenses or for administration of various negative sanctions. A total weighted score for each facility based upon the combined weights of all violations should be calculated. Following is an example of how the scores should be calculated:

<table>
<thead>
<tr>
<th>Rule Violations</th>
<th>Weights</th>
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<tbody>
<tr>
<td>Rule 1</td>
<td>7</td>
</tr>
<tr>
<td>Rule 2</td>
<td>6</td>
</tr>
<tr>
<td>Rule 3</td>
<td>+8</td>
</tr>
</tbody>
</table>

Sum of Weights = 21

Under the above example a perfect compliance score with no non-compliance areas would be a score of “0”. The higher the score, the lower the compliance would be. However, this is not congruent with the common usage of scores in which the higher score is associated with better compliance. In order to accommodate our familiarity with higher scores for the better facilities, the weighted score should be deducted from an arbitrary constant score of “100”. Thus a weighted non-compliance score of “20” will convert to a positive score of “80”. This is more intuitive to individuals as they think about scores and measurement.

Using the previous example, the final weighted score would be computed as follows:

<table>
<thead>
<tr>
<th>Rule Violations</th>
<th>Weights</th>
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</thead>
<tbody>
<tr>
<td>Rule 1</td>
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<tr>
<td>Rule 2</td>
<td>6</td>
</tr>
<tr>
<td>Rule 3</td>
<td>+8</td>
</tr>
</tbody>
</table>

Sum of Weights = 21

Final Calculation:

100
-21
+79
5) The fifth step in the process is to compute and apply the standard deviation to the data. The mean and standard deviation of all weighted scores computed in the pilot application in step #4 should then be calculated. The mean and standard deviation of all final weighted scores computed in the pilot application in step #4 should then be calculated. Based upon experience with implementing licensing weighting/risk assessment systems, it is recommended that if a final weighted score is no more than one standard deviation below the mean, a regular license should be issued. If a score is between one standard deviation below the mean and two standard deviations below the mean, a provisional license should be issued (the length of the provisional license will vary based upon the severity of the non-compliance), or intermediate negative sanctions should be administered. If a score is less then two standard deviations below the mean, no license should be issued or a more severe negative sanction should be administered.

For example, if the standard deviation is 18 and the mean is 88, following is the distribution of the weighted scores used to determine the type of license to be issued:

- Score of 100 — 70 = Regular license/no sanction
- Score of 69 — 52 = Provisional license/intermediate sanction such as warnings, administrative fines or restriction on admissions
- Score of 51 and below = No license/severe sanction such as revocation or administrative closure

6) The final weighted scores from the pilot application should be applied to the standard deviation cut-off points to determine the type of license or negative sanction issued. These data should be studied to compare types of licenses or sanctions issued under pre-weighting vs weighting.

7) Before implementing the licensing weighting/risk assessment system the following additional licensing factors should be considered and incorporated as necessary into the licensing system.
   a) repeated violations from the previous licensing inspection;
   b) violation with high risk items (possibly a weight of 8.0);
   c) discretion of licensing inspector to recommend variance from licensing weighting system.

8) Whenever licensing rules are amended, or at least every 5 years, the weights should be recomputed and the weighting system re-evaluated.

The licensing weighting system as described here can be used to license any type of human care facility including child care, adult care, residential care and part-day care facilities. Licensing weighting/risk assessment systems have been developed in the majority of states.
Since the concept, development and implementation of weighting/risk assessment systems is relatively new to the field of licensing, the long term impact and benefits of weighting/risk assessment systems have not been fully realized through the use of validation studies (Please see the section on Future Research to address this concern). The potential of using weighting/risk assessment systems and modifications of weighting, to help standardize the implementation and enforcement of licensing rules is an exciting area of research to pursue in the field of regulatory administration.

**Licensing Indicator Systems**

As mentioned in the weighting/risk assessment system section of this chapter, indicator checklists or licensing indicator systems are used to improve upon instrument based program monitoring (checklist) systems. The licensing indicator system is one method of assuring compliance with licensing rules in a time efficient manner. The concept has been developed and successfully implemented in several states and for different human service types. The licensing indicator system was originally developed in Pennsylvania in 1977 for use in licensing child care centers. The original intent was to develop an abbreviated licensing instrument in order to refocus licensing investigation time to assess and assist in quality enhancement activities.

From 1980-1984, the US Department of Health and Human Services funded a project to study and further develop a licensing indicator system for child day care facilities on a national level. The federally funded project, known as the Children’s Services Monitoring Transfer Consortium, organized researchers, state licensing administrators and professional staff from Pennsylvania, Michigan, West Virginia, Texas, New York City and California to review and refine the existing Pennsylvania system for possible use by other states.

The purpose of a licensing indicator system is to increase the efficiency and effectiveness of an existing licensing system by refocusing the emphasis of the licensing process. A licensing indicator system is intended to complement, and not replace, an existing licensing measurement system. Through use of the licensing indicator system, less time is spent conducting annual inspections of facilities with a history of high compliance with the licensing rules, and more time is spent a) providing technical assistance to help facilities comply with licensing rules and b) conducting additional inspections of facilities and agencies with low compliance with licensing rules.

The licensing indicator system is actually a shortened version of a comprehensive licensing inspection instrument. A small number of rules are selected based upon a statistical methodology designed for this specific purpose. The licensing indicator system uses a measurement tool, designed to measure compliance with a small number of rules, that predicts high compliance with all the rules. If a facility is in complete compliance with all of the rules
measured in the licensing indicator system, high compliance with all the rules is statistically predicted. It is critical to understand that the rules for the licensing indicator system are selected statistically (the statistical technique is called the phi-coefficient and generally is set at a p value of .01 or higher) and not based upon value judgement (arbitrary assignment, no basis from research literature), risk assessment or frequent rule violations. The rules are selected based upon an SPSSPC+ computer software package that compares violations of facilities with high compliance versus facilities with low compliance. The rules that are most often out of compliance in low compliance facilities and in compliance in high compliance facilities will be the indicator or predictor rules.

**Prerequisites for implementing a licensing indicator system**

Before developing and implementing a licensing indicator system it is important that the existing licensing system is comprehensive and well established. The following are prerequisites to implementation of an indicator system:

1) Licensing rules must be comprehensive, well written and measurable. Rules are the building blocks for any licensing system. If the rules are not well written and measurable a licensing indicator system should not be pursued. Also, if the total number of rules is small, a shortened inspection tool is not valuable.

2) There must be a measurement tool designed to standardize the application and interpretation of the rules. A licensing inspection instrument designed to assure statewide consistency in the application of the rules is essential prior to implementing a licensing indicator system.

3) There should be a licensing weighting system designed to assess the relative risk to consumers if the rule is not met. This system may be a formal weighting system or a simple classification system which categorizes rules by degree of risk. An example of a high degree of risk to consumers would be the accessibility of heat sources or toxins. Having a signature in a record is an example of a low degree of risk to consumers.

4) At least one year of data on rule violations for individual facilities. These data are needed to enter into the computer software system in order to determine the rules that are the indicators or predictors of high compliance.

**How to develop a licensing indicator system**

The basic steps to developing a licensing indicator system include:

1) Select facilities to be used in determining the indicators. If the total number of licensed facilities is less than 200, all 200 facilities can be used. If the total number of licensed facilities exceeds 200, sampling must be done. Generally, a sample of 100 facilities or 10% is acceptable.
When selecting the sample, variables of size of facilities, geographic area, urban/rural, profit/non-profit, public/private and varied compliance levels or scores must be controlled.

2) Violation data for the sampled facilities is entered into a computer software system designed for this purpose (SPSSPC+ is recommended but other statistical packages will do the same).

3) A list of indicator or predictor rules, based on phi coefficients, that were the best indicators of high compliance will be calculated by the computer software system. These are the rules that are most often out of compliance in low compliance facilities and in compliance in high compliance facilities.

4) A small number of additional rules which are determined based on a licensing weighting system or relative risk are added to the statistically selected indicators. The purpose of this step is to assure face validity of the instrument. By adding a smaller number of carefully selected high risk rules to the instrument, the licensing agency can be assured that critical rules are always measured.

5) In order to assure that full compliance with all the rules is maintained, five items selected at random should also be applied as part of the licensing indicator system. The final licensing indicator system instrument contains the indicator rules, high-risk rules and random rules. The total number of rules on an indicator checklist will vary, but will range from 20-45 items.

6) Specific criteria for use of the licensing indicator system are developed.

Criteria for use of the licensing indicator system

The development of very specific criteria for use of the licensing indicator system is perhaps the most critical step of the design process. This is the step at which the determinations are made as to when the licensing indicator system will be used. The determination of use of the system should be standardized and not based upon licensing inspector discretion.

Each licensing agency must develop its own criteria based upon its own historical licensing data and experience. Following are some criteria that may be useful:

1) The facility has had a full or regular license and no negative sanctions have been administered, within the previous two (2) years.

2) The facility has had a score or percentage of compliance above a specified threshold for the previous year.

3) All previous violations have been corrected according to the facility’s plan of correction.

4) No significant validated complaints have been found within the past year.

5) The total number of consumers served has not increased by more than a specified percentage during the past year.
6) There has not been significant staff turnover at the facility/agency within the past year. This may be targeted to certain levels of staff turnover, such as direct care staff or facility directors, depending on which staff are particularly key for program stability.

7) A full inspection using the comprehensive licensing measurement instrument must be done at least every three (3) years.

**Revision of the licensing indicator system**

The licensing indicator system should be continually reevaluated for its effectiveness. The system should be completely revised at least every three years or upon a revision of the rules. In order to achieve the intended purpose of the licensing indicator system of refocusing the emphasis of licensing effort from facilities with high compliance to facilities with low compliance, constant review, evaluation and revision of the licensing indicator system is essential.

Other types of inferential inspection/differential monitoring systems, of which the licensing indicator system is only one, will not be addressed in this chapter because inferential systems/differential monitoring other than the licensing indicator system have not been determined to be statistically valid or reliable. As licensing administrators may potentially need to defend their actions in a court of law, it is essential that the methodology or technique utilized is scientifically sound. When it comes to inferential inspections only those instruments based upon an indicator or weighting/risk assessment methodology can stand up to this rigorous testing.

**Outcome Based Systems**

This is a relatively new phenomenon in the licensing and regulatory administration field. The emphasis in this new approach is to examine outcomes rather than processes. What are the ultimate outcomes for individuals? Determine this and the argument goes there is no need to measure processes directly.

Outcome measurement is appealing in many respects. It does focus on results, something the human services field has been short on demonstrating. However, there is a fallacy in this approach. Results are the end product, but we always have a process to get to the end product.

Another issue is that the purpose of licensing is to prevent harm to consumers. A purely outcome-based system would potentially harm consumers who were in the facilities later determined to “fail” the outcome test. Moreover, there are two other problems:

1. Insufficient (political) agreement on what are acceptable outcomes.
2. Some outcomes will not manifest for years and/or are contaminated by other variables related to other influences on later behavior.

What makes more sense is to tie outcomes to specific regulatory processes that appear to be in a causal or at least a correlational relationship. If licensing agencies were able to clearly link specific results (outcomes) to specific rules (processes), there would be the empirical ability to focus only on those rules that produced positive results for consumers and families and eliminate all other unnecessary rules that do not produce positive outcomes for consumers and families. Specific studies could be conducted and in fact have already been conducted by university researchers. In child care, for example, low staff:child ratios, pre-service and in-service training of staff, highly qualified staff and small group size are all examples of regulatory variables that have been identified as surrogates to program quality that produce positive outcomes for children.

Outcome based or results-oriented systems will impact licensing, but the research literature demonstrates how licensing agencies can clearly link outcomes to regulatory processes that produce the outcomes. This becomes a powerful argument to legislators when this roadmap of process to outcome can be provided.

**Relationship Between Rules and Instruments**

This section is included because this is one area that gets many licensing administrators into trouble. Not enough time is spent on making sure that the instruments developed are the exact reflection of the rules. This is where the interpretive rules that are part of any measurement instrument that accompanies the actual instrument should be placed. This helps to increase the reliability of the instrument and doesn’t hurt the overall validity of the tool either (more on reliability and validity in the next section). Readers who are interested in doing additional reading in this area should refer to the NARA Licensing Curriculum’s chapter on The Formulation of Rules, for additional information on the definition and development of interpretive and substantive rules.

When there is not a close link between instrument development and rule formulation this only leads to headaches for licensing agencies. It may take years and not be evident until you get called into a court of law to defend your licensing system but it will happen.

The analogy of playing Russian Roulette may be useful. As licensing administrators, you are never 100% certain that all your facilities are compliant with all the rules. However, there are certain management procedures and processes that you can put in place to help. A clear link between rules and measurement tools is one of them. Since you are never 100% sure of full compliance (in other words all six chambers of the revolver are not empty if they were, you wouldn’t have Russian Roulette), you must make difficult decisions related to increasing or
decreasing your chances in playing Russian Roulette. So you have the choice of having the
management and procedural safeguards built in (one or two bullets in the revolver) or you
don’t build in the procedural safeguards (four or five bullets in the revolver). It is obvious
statistically where your chances are greater in surviving a potential mishap in a licensing
system.

**Reliability and Validity**

The two concepts of reliability and validity are so critical to measurement, but are so often
overlooked in the development of licensing measurement systems. In fact, it has been
estimated that as many as 30 states may be using a type of differential monitoring/inferential
inspection. But only a few states have followed the rigorous statistical methodology as outlined
in the Licensing Indicator System section.

Very simply, validity deals with content of the particular tool or instrument—does it serve the
purpose for which it is to be used? Does it measure the rules accurately? Usually the answer to
this question is easier for licensing administrators to answer. Since licensing measurement
tools should be directly based upon rules, as explained in the previous section, there should not
be much difficulty in establishing validity. When the tools are not based on the rules, that is
when validity can be and should be called into question.

Reliability deals with the administration of the tool or instrument. Does it measure the rules
consistently and in an objective manner? The answer to this question is much more difficult for
licensing administrators to answer affirmatively. This poses real problems if each
administration of the licensing tool is not consistent and objective. Facilities will not have the
rules applied in an equal and fair manner.

Reliability testing should be done methodologically and scientifically. Inter-rater reliability
should be established for the tools/checklists that are to be used in the field by licensing field
staff. This is a process that has been well documented in the psychological research. This has
not been the case within licensing and regulatory administration. Generally checklists are
designed quickly and are never tested for reliability. This creates a problem that many of us
have heard—the rules are not applied uniformly across the state/province. The reason is that
the tool that is used to measure compliance is not reliable.

In order to establish reliability, licensing inspectors need to go out to facilities in pairs assessing
the same facility at the same time. They then need to compare their results. Do they agree on
what is in compliance and out of compliance at the particular facility? If there is not at least
90% agreement for each rule then additional interpretation of that specific rule is needed.
Establishing reliability is not overly difficult nor overly time consuming; however, it will add a bit
more time before staff are really ready to begin to license facilities (90% agreement on each rule and interpretative rule).

**Balance Between Compliance and Program Quality**

An interesting development in the past five years has been the emphasis on program quality as a result of pressure from consumers, families, advocates and the general public. Consumers and other interested persons are requesting licensing agencies to ensure not only the health, safety and well-being of individuals served in facilities, but also to be concerned advocates for the overall quality of services provided at these facilities.

This increased emphasis and concern for program quality is a difficult area to address for licensing agencies. The resources to complete program quality reviews and to advocate for quality within government are not commensurate with the expectations. However, there are some strategies that can be employed to assist licensing agencies. The first and foremost will be to save time on doing licensing inspections. The indicator system described in this chapter will provide such a tool for saving time. Studies conducted over the past two decades indicate that utilizing an indicator checklist approach saves up to 50% in the on-site inspection time.

The time saved in doing licensing inspections should be used to either:

a) Conduct additional licensing inspections in new or problem facilities
b) Provide technical assistance
c) Complete program quality reviews

This could be done by utilizing a tool from accreditation in observing classrooms, or utilizing a program quality tool from the research literature (for example, Early Childhood Environment Rating Scale). Licensing administrators need to be certain that they have a plan to utilize this extra time or the worst fears of licensing professionals could occur. Two potential scenarios could play out. One is that the time is used to do more and more licensing inspections utilizing the indicator system on more and more facilities. The worst scenario is that staffs are cut. If a state/province can complete all its inspections in half the time, then doesn’t it follow that only half the staff is needed? With a clearly articulated plan on how the licensing and program quality reviews will produce higher quality programs should help to prevent this cost cutting approach. However, this is always a fear that licensing administrators must face.

**Regulatory Compliance Theory**

A very important discovery which has now been replicated on several occasions is the relationship between regulatory compliance and program quality. The essence of the relationship forms the basic tenet for the use of a key indicator approach which states that
there is a non-linear relationship between regulatory compliance and program quality. In laymen’s terms, programs that score low on regulatory compliance also score low on program quality measures but when one looks at the full and substantial levels of regulatory compliance the program quality measure scores plateau out where it is difficult to discriminate between program quality. There appears to be a ceiling effect which makes it difficult to say that those programs that are 100% in compliance with all rules are also the best quality programs. This is not always the case and in fact, many times, those programs that are in substantial compliance have higher program quality scores.

From a public policy perspective this creates problems in requiring a hard line on full (100%) regulatory compliance. A more effective public policy would be to require substantial compliance identifying those rules that predict overall compliance and quality. This is the essence of the key indicator approach in identifying those predictive rules.

From a statistical perspective this is an important consideration because it leads us in the direction that the methods we should be using will be curvi-linear rather than linear. This may help to explain some of the reasons why we haven’t been finding significant relationships between program compliance and quality.

The above relationship has been replicated in several regulatory compliance studies and the predictive rules have been replicated in several regulatory compliance studies as well. On the basis of this relationship it makes possible for policymakers to consider more effective and efficient program monitoring and regulatory compliance strategies.

**Extreme Skewness of Licensing Data**

A very important facet of regulatory compliance data is that it is extremely skewed and not close to being normally distributed. Now, why is this important? It makes it very difficult to analyze skewed data because there is very little variance in the data. It becomes difficult to discriminate between levels of quality and regulatory compliance because only one or two rules that are non-compliant may separate 100s of programs. There is less chance that this will be the case when data are normally distributed, it is generally easier to distinguish between the top performers and the mediocre performers.

It was because of this problem that the concept of weighting of individual rules was introduced in order to enhance the differences amongst the various rules. This weighting of rules has led to the development and implementation of risk assessment systems as stand-alone systems for measuring regulatory compliance and the differential monitoring of programs.
Early Childhood Program Quality Improvement & Indicator Model (ECPQI2M4)

An outgrowth of the above approaches is a comprehensive model that can be used to help improve quality called the Early Childhood Program Quality Improvement and Indicator Model (ECPQI2M4). This model is in its 4th edition utilizing a risk assessment, key indicator and differential monitoring approach (DMLMA4). The reason for introducing these models is to provide an overall structure for states when attempting to develop their program monitoring systems. This model provides crosswalks from licensing and program compliance to more focused program quality improvement systems, such as Quality Rating and Improvement Systems (QRIS).

These models provide a paradigm shift in how we address the balance between program compliance and quality by focusing only on those standards that are proven to make a difference. In 20 years we will have fewer regulations and standards and better outcomes for children because the program monitoring system will be working smarter, not harder. Only those standards that empirically demonstrate a positive impact will be enforced, all others will go by the waste-side.

Methodological Issues

These are some of the key methodological issues that have surfaced over the past 40 years that will need to be addressed if we continue to use these methodologies:

1) The need for states to routinely conduct reliability testing is vitally important to make sure that their licensing staff/inspectors are consistently measuring rules.

2) The balancing between program compliance and program quality.

3) Determining the most effective and efficient threshold is critical because as one becomes more efficient a loss of effectiveness does occur which can lead to an increase in false positives and negatives. False positives are not as critical as false negatives because it would only involve inspecting programs with a comprehensive review that wasn’t necessary; but with a false negative a program could be missed that really did need a full comprehensive review rather than an abbreviated review. To solve this threshold issue will take a good deal of sensitivity analyses to determine the correct number of key indicator/predictor rules to be included.

Lessons Learned

Over the past 40 years here are some lessons learned which should help us as we move forward:
1) We have learned how to deal more effectively with very skewed data through dichotomization.

2) Risk assessment only focuses on compliance and high risk rules which generally are always in compliance. This provides an interesting dilemma when thinking about the efficiency of this approach. One can’t argue with its effectiveness because you are monitoring for risk and the prevention of harm which is the essence of regulatory compliance. But is it really efficient to review rules that are generally in compliance. Isn’t it more efficient to monitor rules that discriminate between high vs low compliant programs to determine if a more comprehensive review needs to be done. Keep in mind that risk assessment is based upon weighting of rules which was never intended to be used as a stand alone system but rather one to enhance the key indicator methodology by creating more variance in the data. A validation study to determine if risk assessment systems really work in finding additional non-compliance is warranted as is the basic tenet of key indicator systems.

3) Key indicators focus on high and low compliance differences with these rules generally being somewhere in the middle range, not in compliance the majority of the time nor out of compliance the majority of the time.

4) It continues to be a fact that all rules are not created equal nor are they administered equally. This is very important concept for risk assessment systems as well as a measurement issue in that we are not dealing with equality in measuring each rule. This is where the weighting of each rule comes into play.

5) Most recently we have seen that when higher standards are applied, especially with Pre-K initiatives, this goes a long way in helping to discriminate the top performers from the mediocre performers. With licensing data which is very skewed this has been a real problem in discriminating between the best programs and those that are at a lower level. Because the data are so skewed all these high performer and mediocre programs are all grouped together. This is the nature of regulatory compliance data which does not do a good job of distinguishing between the best and the near best, what it is good at is determining the really poor performing providers.

**Future Research**

Here are some of the key research that needs to be accomplished in the near future related to human service licensing measurement, regulatory compliance, and program monitoring systems.

1) The crucial need for future research in the human services licensing and regulatory compliance area is for validation studies of the above approaches, Key Indicators and Risk Assessment methodologies to make certain that they are working as they should. This crucial
need has been pointed out by other authors with the ASPE White Paper as the most poignant example of this suggestion.

2) Another validation study is needed regarding the relationship between program compliance and program quality. This is such an important finding about the plateau of program quality scores with increasing regulatory compliance as one moves from substantial compliance with all rules to full compliance with all rules.

3) A clear delineation needs to occur to establish appropriate thresholds for the number of key indicator/predictor rules that provide a balance between efficiency and effectiveness that can diminish the number of false positives and especially false negatives.

Conclusion
This NARA Licensing Curriculum chapter provides a brief overview to the major issues confronting licensing administrators when they consider licensing tools and measurement systems. The emphasis upon quantitative systems was reflected in this chapter because of the need to develop cost effective and efficient licensing systems as the number of facilities continues to grow with shrinking resources. Also there is a compounding effect with higher expectations on licensing agencies to be concerned more about program quality.

The chapter showed the various types of measurement tools that apply to licensing and regulatory administration. It is clear that given the nature of licensing there are certain tools more suited than others, such as checklists versus rating scales. A very detailed description of both licensing weighting/risk assessment and indicator systems was provided. The reason for this emphasis is that these are two very valid and reliable tools that can be used by licensing administrators in making their agencies more effective and efficient. The licensing measurement field is changing constantly as new approaches are introduced. For example, within the program evaluation field there is a move to have a better balance between quantitative and qualitative analyses. It will not be long before this initiative has its impact on the licensing measurement field as well.

This paper has provided a much needed update to what is occurring within the human service licensing and regulatory compliance area. It reviewed what has been in place for several decades but also provided new material to consider in future research, methodological issues, and lessons learned.

To summarize what we know about human service licensing measurement, regulatory compliance, and program monitoring:

- The relationship between regulatory compliance and quality is not linear.
Regulatory compliance has difficulty in distinguishing the best programs from the mediocre programs.

Regulatory compliance is very effective at identifying the worse programs.

Balance regulatory compliance with quality indicators.

Need to validate differential monitoring approaches, such as risk assessment and key indicators.

What is the ideal threshold for the number of key indicator/predictor rules.

Risk assessment rules are usually in compliance.

Key indicator/predictor rules are not usually in compliance but are not out of compliance a great deal.

What is it about key indicator/predictor rules that make them so effective in discriminating between high and low performing programs.

Licensing data are very skewed and because of this there is the need to dichotomize the data.

There is very little variance in licensing data with generally only 20 rules separating the top compliant programs from the worst.

The majority of programs (60%+) are in substantial or full compliance with rules.

There is a balance between being effective and efficient that needs to be identified because as the system becomes more efficient it becomes less effective.

As a system becomes more efficient it also can produce additional false positives and negatives which results in lessened effectiveness in program monitoring.

Higher standards (as applied through Pre-K or QRIS) help to distinguish between the best and mediocre programs.

Resources

For the interested reader, please consult the following excellent publications by the Assistant Secretary’s Office for Planning and Evaluation and the Office of Child Care that will provide additional insights into program monitoring in general, differential monitoring in particular, risk assessment and key indicator systems:

ASPE/Monitoring White Paper:
http://aspe.hhs.gov/hsp/15/ece_monitoring/rpt_ece_monitoring.cfm

OCC/Differential Monitoring, Risk Assessment and Key Indicators:

This website provides many additional websites and reports:
RIKI Website for additional publications and websites:
References


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Using Childcare Programs as a Portal for Changing the Eating Behaviors of Young Children

Richard Fiene, PhD

Introduction

Given the epidemic of overweight and obesity among children, helping them to eat better is an important goal. There are few interventions that are effective in dealing with childhood overweight and obesity. This chapter outlines an intervention that has proven to be effective based on randomized clinical trials.

Why use childcare as an entry point for dealing with the issue of overweight and obesity among children? Because today the majority of preschool-age children participate in some form of childcare — and eat 1 or more of their daily meals during that time. Five years ago, we began to see this demographic shift. Therefore, childcare programs are a natural portal for interventions targeted to young children and their families.

Many types of interventions related to childcare and childhood obesity have already been instituted at the state, regional and local levels. Several state and regional approaches are discussed briefly in the next section of this chapter. These are very broad-based public policy initiatives that lack empirical support for their effectiveness. At the local level, workshops, classes, seminars, technical assistance and, most recently, mentoring sessions seek to address childhood obesity. For the most part, their effectiveness has also not been tested. This chapter focuses specifically on mentoring because it has been demonstrated to be the most effective in producing behavioral change in childcare settings.
The Effectiveness of Mentoring: A Randomized Clinical Trial of Mentoring in Childcare

The use of mentoring in childcare has been documented in the literature for the past 10 to 15 years. It has been demonstrated to be an effective mode of training. Many studies on mentoring track the progress of the intervention; some studies included comparison groups, but few, if any, employed a truly randomized clinical trial design. This chapter describes the pre- and posttest data collected as part of a randomized clinical trial on mentoring in childcare and suggests how content relevant to children's eating behaviors could be introduced into the model.

This study in south central Pennsylvania — to demonstrate the effectiveness of a mentoring approach with infant/toddler caregivers — involved 40 caregivers from 20 childcare sites licensed by the Pennsylvania Department of Public Welfare (Southcentral Pennsylvania Infant Child Care Provider Mentoring Study, supported by the Pennsylvania Department of Public Welfare, July 2000–June 2003). The results reported in this chapter are from the pre- and posttest data-collection phase of the study, and include descriptive data on individual programs, program directors and caregivers, as well as comparisons among programs.

Childcare Program Statistics

The average age of the directors of childcare programs participating in this study was 33 years of age, with a range from 24 to 51 years of age. The directors were predominantly white (80%). Their level of education varied: 8% reported to have an associate degree, 60% a bachelor's degree and 32% a master's degree. The directors had been employed by their programs for an average of 29 months, with a range from 5 to 130 months. Overall, although the directors were fairly young, they had a significant amount of on-the-job experience and were well-educated individuals.

Other descriptive statistics on the program directors include the following:

- Salaries ranged from $22,000 to $27,000 per year

- Some 62% were in a family with a dental plan
- Some 65% were in a family with a dental plan

The average age in this study was 33, and the average number of years of experience was 5. Some of the caregivers were part-time, but the majority were full-time. The average size was 95 children, and the average was 2 years of experience.

Study Design

The study employed a group of caregivers in 2001, with the goal of improving the quality of care for infants and toddlers. The study included works by the author and the team, and the results were presented at subsequent conferences.
Some 62% were provided health insurance and 57% were provided some form of dental or life insurance.

Some 65% were provided a retirement plan.

The average age of the caregivers in the childcare programs participating in this study was 35 years of age, with a range of 20 to 64 years of age. The caregivers were predominantly white (70%). Some 47% of the caregivers reported having a high school diploma, 26% some college credit, 13% an associate degree, 8% a bachelor’s degree, 5% a Child Development Associate certificate and 2% a master’s degree. The caregivers had been employed by their programs for an average of 37 months, with a range of 4 to 144 months. They had worked in the early childhood field for 75 months on average, with a range of 4 to 220 months.

Other descriptive statistics on the caregivers include the following:

- Annual pay ranged from $12,000 to $17,500.
- Some 55% were provided health insurance and 43% were provided some form of dental or life insurance.
- Some 43% were provided a retirement plan.

The average size of the childcare programs participating in the study was 95 children and 17 staff employed on either a full-time or part-time basis. The average weekly fee was $157 for infant care and $134 for toddler care.

Study Design

The study employed a truly randomized design: 20 participating childcare programs were randomly assigned to 1 of 2 groups, either the mentoring group or a control group without mentoring. From September to December 2001, staff in the mentoring group received intensive mentoring from a seasoned early childhood professional. That individual had many years of experience in the early childhood field as both a childcare program director and a teacher. The control group received routine in-service training, which included workshop training that was available in the local community, but they did not receive the mentoring intervention. However, the control group did subsequently receive the mentoring intervention from March to June.
2002. The study sought to determine how the 2 groups changed from the pretest data-collection period (September 2001 to June 2002) — when they were essentially equivalent — to after the mentoring period.

To assess changes in the caregivers, the study used 4 data-collection and measurement tools:

- Infant Toddler Environmental Rating Scale (ITERS), a global measure of infant classroom quality
- Arnett Caregiver Observation Scale, a measure that rates the interactions between children and their caregivers
- Knowledge of Infant Development Inventory (KIDI), a measure that gives an indication of the overall knowledge that an individual has of infant development
- Bloom Program Administration Scale, a measure that rates the overall organizational climate of a childcare center

**Study Results**

The similarity of the mentoring and control groups was assessed during the pretest data-collection phase. During this phase, the 2 groups showed no statistically significant differences on any of the 4 measures. When the programs and caregivers were measured again at posttest, the results were significantly different. In the aggregate, the programs that continued with the mentoring project (n = 20) showed improvements in the overall quality of care. There was a +0.50 increase on the ITERS; a +0.35 increase on the Arnett; a 10% increase on the KIDI; and a 7-point increase on the Bloom scale. Four caregivers (10%) dropped out of the project between pre- and posttest: 2 in the mentoring group and 2 in the control group. The programs that received the mentoring intervention had as much difficulty retaining staff as did the control-group programs. The only factor that correlated highly with staff retention was the salary of the caregiver (r = .68). There was a strong relationship between staff salaries and the ITERS score (.77) and Arnett (.45) score: The higher the salaries, the higher the rating of overall program quality and child/caregiver interactions.

When the data are broken out by mentoring versus comparison group, a very different picture emerges. (See Table 1.)
Table 1. Results on 4 Measures for the Mentoring Intervention Group (n = 18) and Control Group (n = 22)

<table>
<thead>
<tr>
<th>Measure</th>
<th>Pretest</th>
<th>Posttest</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Intervention</td>
<td>Control</td>
<td>Intervention</td>
</tr>
<tr>
<td>ITERS</td>
<td>3.89</td>
<td>4.05</td>
<td>4.74</td>
</tr>
<tr>
<td>Arnett</td>
<td>3.33</td>
<td>3.36</td>
<td>3.84</td>
</tr>
<tr>
<td>KIDI</td>
<td>70%</td>
<td>70%</td>
<td>90%</td>
</tr>
<tr>
<td>Bloom</td>
<td>83</td>
<td>87</td>
<td>94</td>
</tr>
</tbody>
</table>

*P<.01

These results, which are statistically significant (P<.01), are important because the mentoring group showed strong positive increases on the 4 measures, while the control group remained the same, showed a small decrease or increased slightly. In the control group sites, the measure of overall global quality (ITERS) dropped from a score of 4.05 to 4.00. On the Arnett scale, the mentoring group increased more than the control group did (i.e., a .51-point increase in the intervention group versus a .14-point increase in the control group). Although the results for the overall measures did not reach statistical significance in all cases, when the data were broken out by individual items measured by each tool, many of these did reach statistical significance. (See Tables 2 and 3.)

It appears that mentoring had a positive effect for all of the intervention programs, but it worked best in those programs in which the staff was most receptive (the teacher and director thought the mentoring would be helpful, rather than just the director thinking the mentoring would be helpful). When the programs were grouped by overall quality (e.g., a high group with high quality and a low group with lower quality), the high group improved significantly more than did the low group. In some cases, the high group increased by 2.50 points on the ITERS. Although the low group showed improvement, there were more obstacles to overcome and thus the gains were
Table 2. Results for the Intervention Group for Items Contained Within 2 Measurement Tools

<table>
<thead>
<tr>
<th>Tool and Areas Measured</th>
<th>Pretest</th>
<th>Posttest</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>ITERS:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Routines</td>
<td>4.03</td>
<td>5.21</td>
<td>.005</td>
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<tr>
<td>Listening activities</td>
<td>3.77</td>
<td>4.50</td>
<td>.05</td>
</tr>
<tr>
<td>Learning activities</td>
<td>4.00</td>
<td>4.71</td>
<td>.05</td>
</tr>
<tr>
<td>Interactions</td>
<td>3.89</td>
<td>4.91</td>
<td>.01</td>
</tr>
<tr>
<td>Adult needs</td>
<td>4.10</td>
<td>4.70</td>
<td>.05</td>
</tr>
<tr>
<td>Arnett:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sensitivity</td>
<td>3.33</td>
<td>3.90</td>
<td>.001</td>
</tr>
<tr>
<td>Appropriate discipline</td>
<td>3.40</td>
<td>3.70</td>
<td>.05</td>
</tr>
</tbody>
</table>

Table 3. Results for the Control Group for Items Contained Within 2 Measurement Tools

<table>
<thead>
<tr>
<th>Tool and Areas Measured</th>
<th>Pretest</th>
<th>Posttest</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>ITERS:</td>
<td></td>
<td></td>
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<tr>
<td>Routines</td>
<td>4.10</td>
<td>4.20</td>
<td>—</td>
</tr>
<tr>
<td>Listening activities</td>
<td>4.01</td>
<td>3.89</td>
<td>—</td>
</tr>
<tr>
<td>Learning activities</td>
<td>3.99</td>
<td>4.11</td>
<td>—</td>
</tr>
<tr>
<td>Interactions</td>
<td>4.00</td>
<td>3.56</td>
<td>.02</td>
</tr>
<tr>
<td>Adult needs</td>
<td>3.90</td>
<td>3.90</td>
<td>—</td>
</tr>
<tr>
<td>Arnett:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sensitivity</td>
<td>3.46</td>
<td>3.50</td>
<td>—</td>
</tr>
<tr>
<td>Appropriate discipline</td>
<td>3.33</td>
<td>3.34</td>
<td>—</td>
</tr>
</tbody>
</table>

less than in the high group. In the low group, the teachers were not as motivated to make the changes suggested by the mentors because from the beginning they were volunteered by their director rather than this being a mutual decision by the director and teacher.

The data clearly showed that the intervention was significantly effective, with improvements in the areas measured by the ITERS and Arnett instruments. The overall impact of the intervention led to a positive change in the quality of care provided, as reflected in the posttest scores. These findings reinforce the importance of mentorship programs in enhancing the professionalism and effectiveness of childcare providers.
The data clearly demonstrate that the sites that were mentored improved significantly on the ITERS and Arnett measures. This is particularly important given that the intervention was only 4 to 5 months long and the individuals in the mentored group had lower scores on the Bloom scale preintervention. Another interesting result was the relationship between the Bloom scale and the ITERS and the Arnett scales. There were significant relationships between the Bloom scale (measures of professional development) and the ITERS (n = .56; P<.01) and Arnett (n = .46; P<.01) scales.

The overall organizational climate of the center appears to have an influence on how a program's quality increases over time. More than 40% of the variance in overall quality of childcare programs was accounted for by how staff felt decisions were made at the center (e.g., whether they had self-sufficiency in making decisions) and how closely the center came to the ideal for staff pay and promotion opportunities, relationships with co-workers, agreement among staff on program goals, innovativeness and creative problem solving.

These data clearly demonstrate how the mentored programs improved from the pretest to the posttest on several program quality measures. This is an important finding because historically the majority of mentoring projects have relied on anecdotal evidence to demonstrate their effectiveness. Very few programs have conducted randomized trials of their mentoring interventions.

The data indicate that training and technical assistance interventions are needed in infant/toddler programs because of the low scores these programs received on various program quality measures. Without interventions, the quality of these programs may actually worsen over time. This is a hypothesis that is supported by data from other studies.

An interesting finding was the strong relationship between organizational climate scores on the Bloom scale and the overall program quality scales — the ITERS and the Arnett. Previous research has shown the importance of commitment to professional development and the overall quality of the childcare program. Data from this study support this initial finding. The findings in this study build upon the findings of previous studies and demonstrate the importance of an organizational climate that supports openness and self-sufficiency in decision making.
Public Policy Implications

The public policy implications of the findings from this randomized clinical trial are significant because they demonstrate that a mentoring intervention can produce positive changes in the quality of childcare programs. Previous research has indicated that interventions that increase the number of hours of training provided to staff result in staff interactions with children that are consistently more developmentally appropriate. Mentoring fits within this model because it is an intensive one-on-one intervention in which the mentor and the individual who is mentored are engaged in problem-solving activities to improve the quality of the staff-child interactions and the overall environment of the childcare program.

An additional public policy implication is that even when the best training (e.g., intensive mentoring) is provided to childcare staff, it is unlikely to positively affect turnover in the long run. The results of this study suggest that the only factor that impacts turnover is the salary of the staff: The higher the salary of staff, the lower the turnover rate. In addition, greater than 56% of the variance in overall program quality is accounted for by staff salaries. Therefore, the issue of staff compensation in the childcare setting must be addressed. If it is not, well-trained staff will continue to leave their employment, and children will not reap the benefits of care-provider training.

In summary, from a public policy perspective, this research study indicates that the most important factors for improving the overall quality of childcare programs include the following:

- Training that is targeted through a mentoring approach (70 to 85 hours at a minimum over 4 months)
- An educated program director (with at least a bachelor’s degree in early childhood education and state teaching certification)
- Experienced caregivers (with 5 years or more in the childcare field)
- Appropriate compensation (e.g., $20,000 to $25,000 annually for caregivers/teachers and $30,000 to $35,000 for directors)
- A program director who has an open-minded decision-making process in which she or he is willing to engage teaching staff in all decisions related to professional development
Statewide Study of Childcare Quality and Nutrition-Related Activities

In a statewide study of early childcare and education\(^6\) that obtained global assessments of quality, my colleagues and I found a disturbing result. In more than 70\% of childcare centers where nutrition-related activities were measured, the following occurred:

- The meal/snack schedule was inappropriate (eg, a child is made to wait to eat, even if hungry)
- Food served was of unacceptable nutritional value
- Sanitary conditions were not usually maintained (eg, most children and/or adults did not wash hands before handling food, tables were not sanitized, toiletting/diapering and food preparation areas were not separated)
- There was a negative social atmosphere around eating (eg, staff enforced manners harshly, children were forced to eat)
- No accommodations were made for children’s food allergies

These are important and distressing findings. In the programs where these situations occurred, none had a mentoring program in place when these results were collected.

Similar results were found for in-home childcare as well. In this same study, the following situations were present in 85\% of in-home childcare programs:

- Meal/snack schedule was irregular
- Cooking and eating areas were not kept clean
- Infants were not held for feedings and were routinely fed by propping a bottle
- Infants and toddlers were put to bed with bottles
- The nutritional quality of food was questionable

These childcare programs, both at centers and in homes, could benefit from a mentoring program, which was not available to them when this study was performed. A key benefit of mentoring is that it can be very flexible with
content of the program. Mentoring can easily include specific components that deal with children's eating. In fact, nutritional modules have been built into both center-based and in-home mentoring programs. If this type of mentoring intervention were available to the programs in the study just described, the results could have been very different. The next section of this chapter discusses nutrition content in mentoring, as well as specific mentoring modules.

A series of studies conducted by Fiene\(^3\) demonstrated that traditional workshop training for caregivers is not effective. When workshop instruction is linked with certificate programs that require a minimum of 24 hours of instruction, the certificate programs are more effective in producing behavioral change in caregivers. However, the most significant and longest-lasting behavioral changes in caregivers were found when these caregivers participated in mentoring programs of various lengths. The programs that were most effective in producing positive, developmentally appropriate changes in young children (based on the Developmental Observation Checklist System, or DOCS\(^7\)) involved mentoring of the child's caregiver, their parents and the childcare director. Figure 1 demonstrates this relationship. (DOCS is a comprehensive developmental assessment of young children from infancy to preschool. The purpose of the DOCS is to identify infants and children who are developing normally and those significantly below their peers in acquiring cognitive, language, social and motor abilities; to give direction to instructional practice; and to document educational progress.)
States’ Initiatives Related to Childhood Obesity

At a state level, there are a number of public policy initiatives that deal with childhood obesity. North Carolina, New York and Texas have implemented innovative efforts to deal with this issue at a more global level than the mentoring intervention described above.

North Carolina

Color Me Healthy is a joint effort of the North Carolina Cooperative Extension Service and the North Carolina Governor’s Council on Physical Fitness and Health. These 2 lead organizations also partnered with the Start with Your Heart program and the North Carolina Initiative for Healthy Weight in Children and Adolescents. Start with Your Heart program is a statewide task force to reduce the incidence of heart attacks and strokes in North Carolina. The North Carolina Initiative for Healthy Weight in Children and Adolescents is a statewide initiative to address the problem of
childhood obesity in North Carolina. County extension agents are asked to bring a partner of their choice to training in December. Family and Consumer Science agents, who are state employees, in the past, have partnered with local health departments, childcare resource and referral agencies, Healthy Carolinians (Healthy Carolinians is an effort to develop community-based partnerships to improve health in North Carolina; established in 1994, Healthy Carolinians is based on community engagement principles), local Fitness Councils or community volunteers. Color Me Healthy is designed to reach children 4 to 5 years of age with fun and interactive learning opportunities. It provides caregivers in childcare programs with quick and easy tools to teach young children about healthy eating and physical activity.

**New York**

*Eat Well Play Hard* is an initiative spearheaded by the New York Department of Health, seeks to prevent overweight and the accompanying long-term risks of chronic disease, such as diabetes and coronary heart disease, by modifying behavior in preschoolers beginning at 2 years of age. The Department of Health provides funds to childcare programs and public schools to ensure that preschool and early elementary-age children and their families receive consistent and positive messages about nutrition and physical activity. Families are encouraged to adopt the following strategies to achieve life-long healthy choices:

- Increase the amount of developmentally appropriate physical activity
- Increase consumption of 1% or nonfat milk and low-fat dairy products
- Increase consumption of fruits and vegetables

**Texas**

The *Building Healthy Families Initiative* was launched in September 2004 by the Texas Department of State Health Services (formerly Texas Department of Health) in cooperation with Blue Cross and Blue Shield of Texas, the Caring for Children Foundation of Texas, H-E-B (Here Everything’s Better) grocery stores, Texas Medical Association, Texas Hospital Association and the American Heart Association of Texas. The goal of the program is to raise awareness of the long-term health risks associated with obesity in adults and children, and to inspire small lifestyle changes that can lead Texans to live healthier lives through exercise and better food choices.
Using Childcare Programs as a Portal for Changing the Eating Behaviors of Young Children

The 2003 Strategic Plan on the Prevention of Obesity in Texas is the basis for the Building Healthy Families Initiative. Implementation of this program takes into account the demographic diversity among Texans and the urgency of making overweight and obesity awareness and prevention a part of daily life.

Discussion

Childcare programs can be an effective portal for interventions related to children and eating if the interventions are built upon a mentoring model as described in the previous section of this chapter. However, the content of the mentoring must be focused specifically on children's eating behaviors.

With mentoring, caregivers are shown that they have a unique opportunity to provide nutrition education to children on a continuing basis, rather than through a week-long nutrition unit once or twice during the year. Ideally nutrition and physical activity should be part of the ongoing childcare curriculum.

Nutrition education during the early childhood years is especially important because it is during this period that lifetime eating habits are formed. The quality of nutrition for children 2 to 5 years of age is especially important because it affects their growth and development. Childcare programs need to provide healthy foods that meet recommended dietary guidelines — and offer only those foods to children. Children do not automatically make healthy decisions about food. Without nutrition education and guidance, they tend to choose foods that are high in sodium, salt, sugar and fat, or those foods that are familiar to them. The goal of nutrition education in childcare is to encourage children to make wise choices about the foods they eat.

Childcare providers should be aware that large portion sizes are a major contributing factor in overweight and obesity at all age levels. Providers should serve age-adjusted recommended portions.

Childcare programs should not encourage, force or bribe children to eat more than they actually need. The goal should be for children to learn to self-regulate their food intake — and to realize when they are full and stop eating when satiated.
Caregivers can teach children to recognize the link between nutrition and physical well-being. Children need to be given basic information on the nutrients in foods and their effect on physical growth and development.

Recommendations for caregivers on helping children learn to eat healthy foods in a healthy way include the following:

- Serve children age-appropriate amounts and offer seconds only if the child asks for more.
- Encourage children to eat slowly. Involving children in conversation about foods and eating preferences during snacks and mealtime helps to slow their intake rate and provides an opportunity to discuss nutrition and foods on a daily basis.
- Serve meals and snacks at specific times and remove food when mealtime is over. Some children are naturally slow eaters and may need a few extra minutes to finish the meal.
- Eating should not become a stand-off between caregiver and child. If a child chooses not to eat, then remove the food and tell the child it is time to move on to the next activity. Explain that the child will have another chance to eat at the next snack or mealtime.
- Eating is a behavior that is strongly influenced by the social environment. The eating behavior of other children can serve as a role model and a positive social pressure for influencing a child's food preferences. Seating a child who refuses to eat corn with other children who enjoy eating corn will likely increase the child's willingness to eat corn.
- Caregivers should model what they teach. Do not have coffee, a donut or a can of soda in the room if you expect children to eat healthy food at regular times.

**Summary and Conclusions**

This chapter discussed using childcare programs as a portal for interventions to change children's eating behaviors, focusing specifically on mentoring of providers as an intervention model. I provided details on an empirical study of mentoring, a randomized clinical trial of mentoring in Pennsylvania childcare programs.
The mentoring model is an approach that all 50 states can use as all have training systems that are funded through the Federal Child Care Development Fund. Unfortunately, the predominant training approach in childcare programs remains traditional workshops that have been demonstrated to be ineffective in training interventions. Although mentoring does cost more to deliver, the effectiveness of this approach offsets its expense. A mentoring approach that focuses on children's eating behaviors during the hours they spend in childcare can be a very effective intervention strategy for producing positive changes in these specific behaviors.

References

PROFESSIONAL DEVELOPMENT AND
THE QUALITY OF CHILD CARE: AN
ASSESSMENT OF PENNSYLVANIA'S
CHILD CARE TRAINING SYSTEM

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ABSTRACT

The education and training of child care workers are viewed as keys to improving classroom/caregiver dynamics and the overall quality of child care. This assessment of the Pennsylvania Child Care/Early Childhood Development Training System offers an analysis of this hypothesis. The research was designed for dual purposes: to identify training needs for Pennsylvania child care providers and to assess the impact of training and work environment on the quality of care. The results highlight specific areas where there are needs for training and reveal a clear association between opportunities for professional growth and the quality of care.

INTRODUCTION

The care of children and concerns about their future are of great importance to our society. The current trend in public opinion and political action highlights our concern about children and their welfare. According to public polls “the fastest growing segment of the electorate is the one concerned about protecting...
children and helping parents be good parents” (McAllister, 1997, p. 36). Further, we have seen new research on the impact of a child’s early experiences on how his or her brain is “wired.” In an effort to bring attention to this important new research on brain development and its implications for public policy, the Families and Work Institute initiated the Early Childhood Public Engagement Campaign. A White House Conference on Early Childhood Development and a television special, *I Am Your Child*, launched this campaign in early 1997. Another White House Conference on child care was held in October 1997. Politicians have been quick to notice that children’s issues strike a special chord with Americans – hence the plethora of new initiatives aimed at the young.

All of this attention on children’s issues is heartening in an era of budget reallocation, welfare reform, and the move to eliminate *Big Government*. However, the extent to which all this *talk* will be translated into *action* is yet to be determined. Regardless, this public attention has brought into focus an area of critical need in our society – quality child care. With the dramatic rise in the number of mothers with small children in the labor force, the need for child care services and the maintenance of quality programs throughout the nation cannot be denied (Katz, 1994). In response to this increased demand there has been a significant rise in the number of licensed child care centers and home-based child care providers – not to mention unregulated child care settings. Welfare reform legislation has also resulted in an increase in mothers needing child care services as they move into the labor force. Some welfare-to-work mothers have been encouraged to provide home-based child care to neighbors and relatives to help meet this increased demand for child care.

Thus, as the need increases and child care facilities spring up to meet the growing demand – both regulated and unregulated – the concern over quality becomes more pressing. A study conducted by Mathematica Policy Research for the U.S. Department of Education (1990) reports that the quality of care will be jeopardized with the trend of serving more children with fewer workers. More recent studies have determined that there is far too little good child care in the United States. Only 14% of center care, 12% of family child care, and an even lower percentage of infant care can be rated as good in this country (Galinsky et al., 1994; Helburn et al., 1995).

Given this state of affairs, research on child care and factors associated with quality care are very important, particularly if they have implications for public policy. State regulations play a key role in ensuring that programs comply with minimum standards regarding structural features and staff qualifications. But minimum standards related to child/staff ratios and educational level of staff are not enough. Other dimensions found to be associated with quality care are classroom/caregiver dynamics (including caregivers’ sensitivity and use of developmentally appropriate practice) and staff characteristics such as specialized education, training, and experience (Love, Schochet & Meckstroth, 1996; Barbour, Peters & Baptiste, 1995).

Education and training of child care workers are viewed as keys to improving classroom/caregiver dynamics and quality of care. But not all education and training are equally effective. The Center for Career Development in Early Care and Education at Wheelock College (newly named as the Wheelock College Institute for Leadership and Career Initiatives) has emphasized the importance of professional development programs for child care providers. The model developed by the Center focuses on linkages between education and training and development of new career opportunities for early childhood practitioners (Morgan et al., 1993). Having all training opportunities build on one another, offering incentives for practitioners to obtain training, and specifying a core body of knowledge for all early childhood care and education practitioners are particularly important elements of a model program for career development. Additionally, the Center posits that a comprehensive, coordinated system of training and education should include the following features: quality control over training content and trainers; a system for assessing training needs and offering training based on those needs; a system to make information about training easily accessible and widely distributed; a vehicle for tracking provider training; a linkage between training and compensation; and an expanded and coordinated plan for funding training – preferably through public/private partnerships.

**The Study of Pennsylvania’s Child Care/Early Childhood Development Training System**

Pennsylvania has recognized the need to offer training opportunities for child care workers as a means to improve the quality of care. Training for various segments of the child care provider population has been available for over ten years. In 1992 a number of separate training programs were integrated into one system – *The Pennsylvania Child Care/Early Childhood Development Training System* (PA CC/ECD). The Pennsylvania Department of Public Welfare (DPW) was instrumental in the development of this training system and has supported the establishment of an affordable and flexible training system that is based on the principles of early childhood education and child development.

Pennsylvania’s child care training initiative began in the early 1990s, as did other statewide training systems. States utilized the program quality portion of the Child Care and Development Block Grant (CCDBG) to fund the
development and implementation of such training systems (Fincu, 1995). The PA CC/ECD Training System was implemented in January 1992 after lengthy public hearings regarding the Child Care and Development Block Grant. Child care advocates expressed a definite need for a comprehensive early childhood training system throughout the state. Advocates felt that a comprehensive training system was a cost-effective way to improve the quality of early childhood programs throughout Pennsylvania.

The PA CC/ECD Training System has experienced a number of system changes since 1992 and several evaluations with the presently described study as just one of these. For example, prior to 1992, the only training available to child care providers was through a home-based, voucher training program. This program proved to be very popular with providers because it gave them ultimate flexibility in the selection of training opportunities. As the training system evolved, the home-based voucher program became part of the overall PA CC/ECD Training System by 1995. However, this program provides very little structure related to course sequencing or focus on core competencies for child caregivers.

Four school-age technical assistance and capacity building projects also existed prior to 1992, but their major focus was not on training. After 1992 this changed and their focus turned to training. In 1995 the four school-age training projects were incorporated into the overall PA CC/ECD Training System. By 1995, all training for center-based, home-based, and school-age providers were under the umbrella of the PA CC/ECD Training System.

The Early Childhood Education Linkage System (ECELS), the program responsible for health and safety training and technical assistance to Pennsylvania’s child care providers, presented the American Red Cross Child Care Course throughout the state from 1992 until 1995. In 1995 this course was incorporated into the PA CC/ECD Training System. This completed the coordination of all training activities related to early childhood and child care under the umbrella of PA CC/ECD with the exception of Head Start and early intervention training.

Since 1992, over 50,000 early childhood providers have received an average of three hours of training on an annual basis. The training opportunities offered to providers include workshops, seminars, videos, learn-at-home materials, conferences, satellite teleconferences, mentoring, vouchers for college coursework, and a number of other training opportunities outside the PA CC/ECD system. The PA CC/ECD Training System is a diverse system of training modalities and funding mechanisms. Several of the PA CC/ECD Training System components have been recognized as innovative. For example, the home-based voucher program and ECELS were recognized in Making a Career of It, a report by the Center for Career Development in Early Care and Education at Wheelock College (Morgan et al., 1993). However, a concern was expressed that training opportunities, albeit comprehensive, were not coordinated to lead an individual on a career path. Therefore, several research studies have been undertaken to determine the effectiveness of the overall system and its implementation.

A Penn State University evaluation research initiated in 1992 helped to delineate the need for additional training opportunities for staff. The accumulative amount of training taken over three years was the key variable that predicted positive developmentally appropriate changes in the classroom (Johnson, 1994). However, this study left unanswered questions about what other factors and features of training are associated with child care quality.

There were overlapping concerns, although different purposes, for two studies initiated in 1996. Wheelock College (Stoney et al., 1997) conducted one study, an assessment of the various early childhood training systems in Pennsylvania, to determine how to coordinate the existing PA CC/ECD Training System with other training systems in an effort to develop a full-fledged early childhood career development system within Pennsylvania.

The other study initiated in 1996 is the one reported herein: Recognizing the importance of tracking the impact of this training system on the quality of care, this research was designed for dual purposes: to identify the training needs for Pennsylvania child care providers and to assess the impact of training and work environment on the quality of care in child care sites. In addition, the results of this research effort are compared to earlier Pennsylvania studies that examined the quality of child care. Within these overarching research goals, this study examined the specific research questions delineated below.

Research Questions Related to Training Needs
- What are the perceived needs for training? Do various provider groups have different needs (e.g. center teachers, center directors, group providers, and family providers)?
- What are the observed needs for training as indicated through the site observations of quality of care?
- What are the most important factors affecting the selection of training? How does the director impact this?
- How do providers evaluate the training? What are their perceptions regarding appropriateness, usefulness, applicability, and effectiveness of training in achieving learning objectives? What is their level of interest in training? And how do they think it applies to their work?
research designs. Ultimately, the goal is to bring about optimal experiences for children in child care. Descriptive and explanatory knowledge about early childhood inservice education or staff development and about program quality is needed to achieve this aim. Other related goals can be served at the same time when research adds to an understanding of quality experiences for children in child care, the value of inservice training for staff development, and the relationship between the two.

**Staff Development Research**

Current education literature addresses a number of issues related to the ongoing professional development of teaching staff. One very important issue concerns the application of knowledge or the ability to transfer learning into practice. What are the most effective strategies used to guarantee the transfer of knowledge into practice? Numerous reasons are provided as to why staff who participate in educational programs do or do not apply in practice what they have learned through education. The perception of program participants about the value and practicality of program content, the presence or absence of follow-up strategies, and supervisory attitudes toward changes required to apply what has been learned are all critical in the transfer of learning (Caffarella, 1994).

The value and practicality of a program implies that a training curriculum should be problem-centered and site-specific. According to Jorde-Bloom and Sheerer (1992), training programs should address real issues and concerns that participants face in their work setting on a daily basis; staff development efforts should facilitate interaction between colleagues; staff developers should “take into account the distinctly different orientations, needs, and interests” of program participants; and training content should focus on bridging the gap between theoretical ideas and the practical realities of the work setting. Jorde-Bloom (1998) also emphasizes the importance of staff becoming active participants in identifying program strengths and areas in need of improvement.

Discussions about the characteristics of effective staff development programs have resulted in some key themes. Holl-Reynolds (1995) maintains the importance of being aware of the rationales underlying the use of particular teaching practices. Rather than focusing on skill training as so many preservice and in-service teacher development programs have done, staff development must be aimed at uncovering and dealing with lay beliefs, attitudes, behaviors, and decision-making strategies that teachers bring to the classroom.

PROFESSIONAL DEVELOPMENT AND QUALITY OF CARE

Staff development research and studies on factors associated with the quality of child care always share the same long term goal, typically hold the same theoretical orientation, and often have variables in common within their
VanderVen (1994) suggests a contextual model of professional development that enhances the current linear model, which is structural. The contextual model recognizes that early childhood is age-specific and is integrated across the domains of care, education, and development; the contextual model is generic and calls for situational application of multidisciplinary knowledge. VanderVen believes that professional development programs should facilitate constructivism and articulation of theory into practice. Knowledge is gained by doing, then reflecting and dialoguing about it—a constructivist model for learning (Jones, 1993).

In light of the contextual model, outcomes-based educational programs have also been recommended as more effective than the competency-based training programs of the past. Representing a paradigm shift, outcome-based programs focus on demonstrating application of knowledge in contextual settings and quality performance of integrated tasks. Simply acquiring knowledge and demonstrating competencies in isolation is not authentic and does not address the importance of making connections between pre-service training (development) and practice (performance).

Finally, as all this relates to teachers in child care settings, career mobility and advancement is seen as a *sine qua non* of professional development programs (Morgan, 1994). According to Morgan, a professional development training system should include these components:

- **Make training count**: when substantial training of good quality is offered, it should carry college credit or be transformed to college credit that can be applied to certificate or degree programs.

- **Improve access to credit-bearing training** for practitioners who are already employed, particularly people of color and individuals from low-income populations.

- **Articulate programs**: accept the Child Development Associate (CDA) Credential to count toward an associate degree program; and allow the associate degree program to count in full toward a bachelor’s degree program (Morgan, 1994, p. 138).

Given this background on staff development, we now raise the fundamental question: What constitutes a high quality professional development program? The National Association for the Education of Young Children (NAEYC) has provided leadership in professional development models for early childhood educators (Bredekamp & Willer, 1994). One of NAEYC’s top priorities is improving professional preparation programs for the diverse staff who care for young children. A current NAEYC initiative, the National Institute for Early Childhood Professional Development, is a system designed to address the complexity of developing staff involved in the care and education of young children, improving the quality and consistency of professional pre-service and in-service programs, and linking them with improvements in practice.

Through the work of NAEYC, Willer (1994, pp. 17–19) has identified these principles from the work of Epstein (1993) and Modigliani (1993) that lay the foundation for effective professional development processes; they include:

- **Professional development is an ongoing process.**
- **Professional development experiences are most effective when grounded in sound theoretical and philosophical base and structured as a coherent and systematic program.**
- **Professional development experiences are most successful when they respond to individuals’ background, experiences, and the current context of their role.**
- **Effective professional development opportunities are structured to promote clear linkages between theory and practice.**
- **Providers of effective professional development experiences have an appropriate knowledge and experience base.**
- **Effective professional development experiences use an active hands-on approach and stress an interactive approach that encourages students to learn from one another.**
- **Effective professional development experiences contribute to positive self-esteem by acknowledging the skills and resources brought to the training process as opposed to creating feelings of self-doubt or inadequacy by immediately calling into question an individual’s current practices.**
- **Effective professional development experiences provide opportunities for application and reflection, and allow for individuals to be observed and receive feedback upon what has been learned.**
- **Students and professionals should be involved in the planning and design of their professional development program.**

This attention to early childhood professional development comes at a critical time. Research on the background and skills of child caregivers paints a bleak picture. There is significant concern that child caregivers lack the skills, knowledge, and education to appropriately address the developmental needs of children. “Six out of seven child care centers provide care that is mediocre to poor. One in eight might actually be jeopardizing children’s safety and development” (Children’s Defense Fund, 1998).

The 1993 National Child Care Staffing Study cited low wages as one factor that accounts for poor quality care. Low wages make recruitment and retention of qualified personnel difficult. Another reason for the low quality of child care is inadequate staff training. “Staff education and training are among the most critical elements in improving children’s experiences in child care” (Children’s Defense Fund, 1998, p. 39). Regardless, many states do not require pre-service
training for teachers in licensed or regulated child care centers. Further, a majority of states require only 12 or fewer hours of annual training (Children's Defense Fund, 1994). Research has shown that a threshold for training to show some impact is around 18 hours (Howes, Smith & Galinsky, 1995).

**Quality of Child Care Research**

Reviews of the research on the factors related to child care quality (Phillips, 1987; Love et al., 1996; Chung & Stoney, 1997) group the studies into several categories. Some studies address global assessments of child care quality while others focus on the structural dimensions of quality or the dynamic measures of classroom quality. For our purposes, studies focusing on global assessments and structural dimensions of quality care are of particular importance.

Research from the late 80s (Phillips, 1987) identifies the following as key indicators of quality child care:
- The program is licensed.
- The child's interaction with the caregiver is frequent, verbal, and educational, rather than custodial and controlling.
- Children are not left to spend their time in aimless play.
- There is an adequate adult-child ratio and reasonable group size.
- The caregiver has a balanced training in child development, some degree of professional experience in child care, and has been in the program for some period of time.

More recent studies (Helburn, 1995; Phillips, Howes & Whitebook, 1992) confirm the importance of these indicators and identify other factors that are important. In addition, the following features of high-quality child care for preschool children include:
- **Space:** the indoor environment is clean, in good repair, and well-ventilated; classroom space is divided into richly equipped activity areas; fenced outdoor play space is equipped with swing, climbing equipment, tricycles, and a sandbox.
- **Children's activities:** most of the time children work individually or in small groups; children select many of their own activities and learn through experiences relevant to their own lives; caregivers facilitate children's involvement, accept individual differences, and adjust expectations to children's developing capacities.
- **Parent-caregiver interaction:** parents are encouraged to observe and participate in the program; caregivers talk frequently with parents about children's behavior and development.

For infants, the following signs of high-quality child care are in addition to the key indicators identified by Phillips (1987):
- Play materials are appropriate for infants and toddlers and stored on low shelves within easy reach.
- Daily schedule includes time for active play, quiet play, naps, snacks, and meals; it is flexible rather than rigid, to meet the needs of individual children; and the atmosphere is warm supportive, and children are never left unsupervised.
- Caregivers respond promptly to infants' and toddlers' distress; hold, talk, sing, and read to them; interact with children in a contingent manner that respects the individual child's interests and tolerance for stimulation.
- Parents are welcome anytime; caregivers talk frequently with parents about children's behavior and development.

In light of this overview, the underlying theme is the consistency in which the above factors, as indicators of quality, appear in the research findings.

**Conceptual Framework**

As previously indicated, staff development research and studies on the quality of child care share the same long term goal and typically the same theoretical orientation. The present study, with its twofold purpose of investigating the PA CC/ECD Training System with respect to user perceptions and the relationship between training and program quality, intersects with the current research literature. Accordingly, its long range purpose, its conceptual underpinnings, and its choice of variables and measures are consistent with previous work in these two areas.

A socio-ecological or systems theory perspective provides a framework for this study. This perspective emphasizes reciprocal transactions between individuals and their environments. Individuals' constructions (beliefs and attitudes) of their social environments, rather than some notion of objective reality, are central to personal adaptation and behavior (Bronfenbrenner, 1979; Lewin, 1935). Child care and training workshops are dynamic, psychological entities as well as physical ones. Providers' social role behaviors and interpersonal relations relevant to the care of children are associated with the totality of factors that constitute a particular child care site (i.e. overall staff and program characteristics). Likewise, providers' role behaviors and relations within child care (staff-staff, staff-child, staff-parents) that contribute to program quality are assumed to influence and be influenced by the PA CC/ECD Training System.
The selection of variables and measures involved in this study, the rationales for the choices, how the variables are conceptually organized, and how they are consistent with previous research are described in the remaining part of this section. These variables are organized into categories as depicted in Figs A and B relevant to the two major purposes of the present study.

**Fig. A. Quality of Care Conceptual Model.**

**Fig. B. Training System Conceptual Model.**

Professional Development and The Quality of Child Care

Figure A illustrates how the variables are conceptually organized and associated with levels of child care quality. Quality of child care is operationalized by scores from the Harms and Clifford Environment Rating Scales, while the various dimensions of a child care work environment are measured with Paula Jorde-Bloom's Early Childhood Work Environment Survey. Characteristics of the work environment are viewed as a primary set of intervening variables.

As measures of program quality, three separate environment rating scales were used in this study: the Early Childhood Environment Rating Scale (ECERS), the Infant/Toddler Environment Rating Scale (ITERS), and the Family Day Care Rating Scale (FDCRS). Although each scale has comparable areas that are assessed, the individual items composing each scale do vary depending on the type of child care site or classroom observed. Across each of these scales, the major areas that are assessed relate to furnishings and display; personal/basic care; language and reasoning; fine/gross motor activities; creative/learning activities; social development; interactions; program structure; and adult needs.

As indicators of the various dimensions of an early childhood work environment, the Early Childhood Work Environment Survey (Jorde-Bloom, 1988, 1998) includes a number of distinct conceptual areas. These areas include organizational climate, summary of worker values, overall commitment of staff to center, summary of how current work environment resembles the ideal, importance of educational goals and objectives, and degree of influence of the teaching staff. Organizational climate consists of the collective perceptions of staff regarding the dimensions of collegiality; emphasis on professional growth; degree of supervisor support; clarity of policies and procedures; fairness and equity of the reward system; degree of autonomy in decision making; goal consensus among staff; emphasis on task orientation; extent to which the physical setting facilitates programming; and degree of innovativeness.

Figure A shows an overview of the variables and how they are conceptually organized with respect to the investigation of factors related to the quality of child care. Although the left- to right-hand side ordering of the variable categories in Figure A suggests directionality of effects, it is important to keep in mind that this study is basically descriptive-correlational in nature. The non-experimental, cross-sectional nature of the research design precludes testing directional hypotheses. Program quality could be the cause or the effect of the other variable categories. Nevertheless, the original rationale for selecting this research design centered on the plausible assumption that higher levels of training of personnel in a program would go hand-in-hand with the quality of
care. In addition to organizational climate, certain staff and program characteristics were also expected to show a positive and statistically significant relationship with the quality of care.

The variable categories of program type and program variables shown on the far left-hand side of Figure A are best viewed as moderating variables. These variables suggest data-based comparisons but are not seen as predictors or mediators of quality (with the exception of accreditation status).

Figure B illustrates the relationships among variable categories pertinent to the identification of training needs and user perceptions of the training system. Of major interest, again, are the comparisons involving program type (family child care, group child care, and centers) and type of staff (directors versus teachers). The model included these specific areas: site characteristics, staff characteristics, quality of training, perceptions of the training system, and quantity of training. Training needs and interests were also identified. Questionnaires administered to child care staff were used to identify perceived training needs and interest areas via teacher and director self reports as well as directors’ views of staff interests and needs. Needs (as opposed to interests) were also gleaned from information obtained from the environmental rating scales.

METHODOLOGY

As previously indicated, this is a cross-sectional study that collected data from child care sites throughout Pennsylvania. Child care sites were sampled and trained fieldworkers conducted site visits to observe the quality of care in classrooms and to administer questionnaires to child care staff. Specific details about the sampling process, fieldworker training, and data collection instruments are described in the following sections.

Sampling

A stratified systematic sampling process was utilized to identify child care sites for this study. At the time in which we drew the sample, there was a population of approximately 4,144 family child care sites, 590 group homes, and 3,067 child care centers (the registered family child care sites and licensed group homes and centers). Within each of these separate lists, we then created sampling frames stratified by geographic region. From these stratified lists, we randomly selected a number of child care sites of each type within the various geographic regions of the state. Our sampling design called for a disproportionate number of sites in each category: 30 family child care homes, 30 group child care homes, and 60 child care centers.

We decided on these numbers for several reasons. First, limited resources and time would not allow us to conduct more than the 120 site visits. Second, to have a sufficient number of group homes to analyze, the number of group child care sites in the sample had to be disproportionate to what they represented in the population. Given the disproportionate nature of the sample, weights were used in any analysis that involved more than one type of child care site.

To encourage voluntary participation in this study, we implemented a number of procedures. First, we initially sent a letter to selected sites to explain the purpose of the study and the importance of the findings for improving the child care training system in Pennsylvania. In this letter we explained the advantages of provider participation in the study: receipt of a voucher to purchase children’s books/toys from Gryphon House ($100 for centers and $50 for family and group homes); an opportunity to have an early childhood professional visit their site and provide some feedback regarding the environment rating scales; and receipt of a certificate acknowledging participation in the study. A follow-up call to the sites was made to further explain the study and encourage their participation. Once a confirmation was received from the site, a fieldworker was assigned to the site to establish a date for a site visit.

A number of the sites initially drawn for the sample were not included in the final total (some were no longer in business, some refused, some could not be visited due to scheduling difficulties). In each case, another randomly drawn site was used as a replacement. Our analysis of the data confirms that the resulting sample was not biased as a result of this replacement; the indicators of quality vary in the expected manner and other site level characteristics reflect known data. The final sample size consisted of 29 family child care homes, 30 group homes, and 60 centers.

Fieldworker Identification and Training

The importance of having trained observers in a study of this nature cannot be underestimated. For this reason, we took care to identify fieldworkers who were familiar with the Harms and Clifford Environment Rating Scales or with the validation procedures used by the National Association for the Education of Young Children when conducting accreditation site visits. Once fieldworkers were identified, they were sent the training materials (video and manual) for the
Harms and Clifford Environment Rating Scales. Subsequently, a training session was held to review these materials and other procedures to be used in setting up and conducting the site visits. A fieldworker manual was prepared and distributed to everyone; monitoring of their work and progress was conducted from the research office; and inter-rater reliability was determined for a small percentage of each fieldworker's observations for the environment rating scales. The high inter-rater reliability scores indicate consistent use of the scales. Furthermore, the overall quality of the data gathered by the fieldworkers attests to their ability.

Data Collection Instruments

The operationalization and measurement of two key areas in this study were previously discussed. Quality of child care was measured through the three Harms and Clifford Environment Rating Scales: ECERS, ITERS, and FDCRS. The scale value for each of the items assessed on these instruments ranges between 1 and 7, where 1 = inadequate, 3 = minimal, 5 = good, and 7 = excellent.

The dimensions of the child care work environment were measured with Paula Jorde-Bloom's Early Childhood Work Environment Survey (ECWES). There are six separate conceptual areas assessed through this instrument, as identified earlier. For each of the organizational climate dimensions, a score of 0 to 10 is calculated by averaging the staff responses to 10 items for each dimension. The summary of worker values is indicated by the percentage of staff (0 to 100%) that identify an organizational climate dimension as one of the three most important aspects of their work. Overall commitment has a range of values between 0 and 10 where 0 = not committed and 10 = highly committed. Staff perceptions of how their current work environment compares with their ideal ranges between 1 = not like my ideal and 5 = like my ideal. The importance of educational goals and objectives is indicated by a priority ranking, ranging from 1 = low priority to 6 = high priority. Finally, the degree of influence of teaching staff regarding organizational decisions is assessed on a scale of 0 to 10 where 0 = very little influence and 10 = considerable influence.

In addition to these standardized instruments, we developed a series of questions to gather background and training information from both directors and teachers within the child care sites. Although the questions were comparable for directors and teachers and across the type of sites, there were some items that applied only to one or the other. Given this, separate instruments were developed. One instrument was for family providers; one for directors of small sites (group homes and some small centers); one for directors of centers; one for teachers of small sites; and one for teachers from centers. In the end, we analyzed the data in terms of the type of site (family, group, or center) as well as type of respondent (director or teacher).

The comprehensive background information gathered with these questionnaires included:

- **Director and/or Teacher Background:** age, sex, race, education, years in early childhood field, years with current employer, employment status, salary, long-term educational goal, CDA status, and parental status.
- **Training Background and Assessment:** number of training hours in past three years, annual training goal, evaluation of training system (appropriateness, achievement of goals/objectives, usefulness, applicability), helpfulness of additional training, specialized training, assessment of specific training modalities, decisions about staff training, presence of staff development plans, compensation for training, factors affecting the selection of training, barriers to training, interest in training, and need for additional training in selected topic areas.
- **Site Characteristics:** age of children in facility, type of facility, licensed capacity, number of classrooms, change in licensed capacity in past year, number of paid staff, number of new staff in current year; presence of assistant director, and accreditation status.

**FINDINGS**

The results of this study address a number of specific research questions within the context of identifying training needs and assessing the factors associated with the quality of care. In presenting the results of the data analysis, we first provide an overview of the background data for each of the provider groups, followed by the findings for the specific research questions.

**Background Data on Provider Groups and Child Care Facilities**

The socio-demographic characteristics of the provider groups, their training background, and various site characteristics are summarized in Tables 1–3 to give a better understanding of the child care providers and facilities included in this study.

As Table 1 shows, the socio-demographic characteristics of this sample are typical of what we find in national statistics. As expected, the vast majority of providers are female. Their average age is between 34.8 and 45.8 with directors slightly older than teachers. A majority of providers are parents (between 59 to
Table 1. Background Characteristics of Provider Groups.*

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Center Directors (N = 60)</th>
<th>Center Teachers (N = 561)</th>
<th>Group Directors (N = 30)</th>
<th>Group Teachers (N = 70)</th>
<th>Family Providers (N = 44)</th>
</tr>
</thead>
<tbody>
<tr>
<td>SEX (% female)</td>
<td>98.3</td>
<td>98.0</td>
<td>100</td>
<td>95.7</td>
<td>93.2</td>
</tr>
<tr>
<td>AGE (mean)</td>
<td>41.6</td>
<td>34.9</td>
<td>45.8</td>
<td>34.8</td>
<td>38.8</td>
</tr>
<tr>
<td>RACE/ETHNICITY</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>88.1</td>
<td>82.6</td>
<td>76.7</td>
<td>80.0</td>
<td>66.7</td>
</tr>
<tr>
<td>Black</td>
<td>8.5</td>
<td>14.4</td>
<td>20.0</td>
<td>17.1</td>
<td>31.0</td>
</tr>
<tr>
<td>Other</td>
<td>3.4</td>
<td>3.0</td>
<td>3.3</td>
<td>2.9</td>
<td>2.4</td>
</tr>
<tr>
<td>PARENTAL STATUS (% yrs)</td>
<td>72.9</td>
<td>59.1</td>
<td>93.3</td>
<td>70.0</td>
<td>90.9</td>
</tr>
<tr>
<td>EDUCATION:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>High school</td>
<td>33.3</td>
<td>32.4</td>
<td>33.3</td>
<td>55.7</td>
<td>54.8</td>
</tr>
<tr>
<td>Some college</td>
<td>1.7</td>
<td>22.4</td>
<td>40.0</td>
<td>27.1</td>
<td>33.3</td>
</tr>
<tr>
<td>Associate degree</td>
<td>13.3</td>
<td>10.8</td>
<td>13.3</td>
<td>2.9</td>
<td>4.8</td>
</tr>
<tr>
<td>Bachelor's degree</td>
<td>33.3</td>
<td>23.7</td>
<td>6.7</td>
<td>10.0</td>
<td>4.8</td>
</tr>
<tr>
<td>Some graduate</td>
<td>30.0</td>
<td>6.4</td>
<td>3.3</td>
<td>4.3</td>
<td>2.4</td>
</tr>
<tr>
<td>Master's degree</td>
<td>13.3</td>
<td>3.1</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Post master's</td>
<td>3.3</td>
<td>1.1</td>
<td>3.3</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Doctorate</td>
<td>1.7</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>YEARS IN EARLY CHILDHOOD</td>
<td>13.7</td>
<td>6.8</td>
<td>13.1</td>
<td>6.5</td>
<td>7.2</td>
</tr>
<tr>
<td>FIELD (mean)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>YEARS WITH EMPLOYER (mean)</td>
<td>8.6</td>
<td>3.7</td>
<td>9.5</td>
<td>4.2</td>
<td>6.5</td>
</tr>
<tr>
<td>EMPLOYER STATUS</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Full-time (35+ hrs)</td>
<td>93.3</td>
<td>62.6</td>
<td>93.3</td>
<td>40.6</td>
<td>80.5</td>
</tr>
<tr>
<td>Part-time</td>
<td>6.7</td>
<td>37.4</td>
<td>6.7</td>
<td>59.4</td>
<td>19.5</td>
</tr>
<tr>
<td>SALARY (approx. average)</td>
<td>$19,900/yr</td>
<td>$6.40/hr</td>
<td>$17,250/yr</td>
<td>$5.89/hr</td>
<td>$12,500/yr</td>
</tr>
<tr>
<td>BENEFITS</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pension</td>
<td>18.5</td>
<td>2.1</td>
<td>2.1</td>
<td>2.1</td>
<td>2.1</td>
</tr>
<tr>
<td>Vision</td>
<td>15.6</td>
<td>2.1</td>
<td>2.1</td>
<td>2.1</td>
<td>2.1</td>
</tr>
<tr>
<td>Dental</td>
<td>32.6</td>
<td>2.1</td>
<td>2.1</td>
<td>2.1</td>
<td>N.A.</td>
</tr>
<tr>
<td>Health</td>
<td>N.A.**</td>
<td>N.A.</td>
<td>N.A.</td>
<td>N.A.</td>
<td>N.A.</td>
</tr>
<tr>
<td>Life insurance</td>
<td>23.5</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Paid maternity</td>
<td>3.2</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Disability</td>
<td>16.3</td>
<td>2.1</td>
<td>2.1</td>
<td>2.1</td>
<td>N.A.</td>
</tr>
<tr>
<td>Education reimbursement</td>
<td>25.9</td>
<td>17.0</td>
<td>25.9</td>
<td>17.0</td>
<td>17.0</td>
</tr>
</tbody>
</table>

* Percentages are reported except where otherwise noted.
** N.A. = Question not asked of this provider group.

Table 2. Training Background of Provider Groups.*

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Center Directors (N = 60)</th>
<th>Center Teachers (N = 561)</th>
<th>Group Directors (N = 30)</th>
<th>Group Teachers (N = 70)</th>
<th>Family Providers (N = 44)</th>
</tr>
</thead>
<tbody>
<tr>
<td>LONG TERM EDUCATIONAL GOAL</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GED/High school</td>
<td>0.0</td>
<td>4.3</td>
<td>6.9</td>
<td>7.4</td>
<td>4.8</td>
</tr>
<tr>
<td>Non-credit adult education</td>
<td>1.8</td>
<td>5.8</td>
<td>6.9</td>
<td>13.2</td>
<td>9.5</td>
</tr>
<tr>
<td>Early childhood certification</td>
<td>0.0</td>
<td>12.2</td>
<td>13.8</td>
<td>16.2</td>
<td>9.5</td>
</tr>
<tr>
<td>Associate degree</td>
<td>1.8</td>
<td>6.8</td>
<td>13.8</td>
<td>4.4</td>
<td>16.7</td>
</tr>
<tr>
<td>College degree</td>
<td>5.4</td>
<td>15.9</td>
<td>13.8</td>
<td>8.8</td>
<td>14.3</td>
</tr>
<tr>
<td>Graduate degree</td>
<td>57.1</td>
<td>17.6</td>
<td>10.3</td>
<td>10.3</td>
<td>4.8</td>
</tr>
<tr>
<td>No long term goals</td>
<td>33.9</td>
<td>37.5</td>
<td>34.5</td>
<td>39.7</td>
<td>40.5</td>
</tr>
<tr>
<td>SEEKING CDA CERTIFICATE</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes*</td>
<td>1.8</td>
<td>16.9</td>
<td>20.8</td>
<td>16.9</td>
<td>25.6</td>
</tr>
<tr>
<td>No</td>
<td>85.5</td>
<td>75.8</td>
<td>79.2</td>
<td>74.6</td>
<td>71.8</td>
</tr>
<tr>
<td>Already have</td>
<td>12.7</td>
<td>7.3</td>
<td>0.0</td>
<td>8.5</td>
<td>2.6</td>
</tr>
<tr>
<td>TRAINING IN PAST 3 YRS (mean hours)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ANNUAL TRAINING GOAL</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6 hours</td>
<td>40.7</td>
<td>67.3</td>
<td>31.0</td>
<td>63.9</td>
<td>53.7</td>
</tr>
<tr>
<td>12 hours</td>
<td>27.1</td>
<td>19.0</td>
<td>31.0</td>
<td>21.3</td>
<td>14.6</td>
</tr>
<tr>
<td>12 + hours</td>
<td>32.2</td>
<td>13.7</td>
<td>37.9</td>
<td>14.8</td>
<td>31.7</td>
</tr>
<tr>
<td>PERSONAL CAREER DEVELOPMENT PLAN</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(% yrs)</td>
<td>N.A.**</td>
<td>55.1</td>
<td>N.A.</td>
<td>N.A.</td>
<td>55.0</td>
</tr>
</tbody>
</table>

* Percentages are reported except where otherwise noted.
** N.A. = Question not asked of this provider group.

93%) with center teachers least likely to hold this status. Center directors hold the highest levels of education while group teachers and family providers have the lowest levels. The directors for both centers and group facilities have been in the field of early childhood education longer than the other provider groups (on average of thirteen years for directors in comparison to approximately seven years for child care teachers and family providers). Center teachers have the least amount of time with their current employer when compared with their total number of years in the field. The vast majority (over 93%) of directors for
both centers and group facilities are full-time, while a majority of group teachers (59.4%) are part-time. Regarding compensation, group teachers are also the lowest paid (approximately $5.89/hour), while center directors, on average, earn the highest salaries – just under $20,000 per year. Benefits are also not prevalent in the field, although center staff are more likely to have some benefits than are home-based providers. Health benefits are the most common, yet less than half (48.7%) of the center teachers report having this benefit.

Table 2 summarizes the responses to questions that are indicators of the extent to which providers are motivated to pursue additional as well as higher levels of education and training. Over one-third of each provider group indicate that they have no long-term educational goals. However, center directors are more likely to express a desire for higher education, with 57.1% indicating that a graduate degree is a long-term educational goal. As far as other child care training, a substantial percentage of providers do not have a Child Development Associate (CDA) certificate, but center directors (12.7%) are more likely to have the CDA than are other provider groups. Furthermore, directors of both centers and group facilities have, on the average, twice the number of training hours than do teacher and family provider groups. Over the past three years, directors averaged over 40 hours of training, while teachers and family providers averaged around 20 hours (just slightly higher than what is required to meet the state regulations of 6 hours per year). The emphasis on only meeting state requirements is further evidenced by the responses from providers when asked to indicate their annual training goal. A majority in each provider group, except group directors, indicates that completing 6 hours is their goal. Both directors of centers and group facilities, as well as family providers show greater interest in education/training beyond the minimum required. The final indicator of a provider’s educational interest and motivation is revealed when asked, “Do you have a plan for your individual career development in early childhood care and education?” More than half of teachers and family providers indicate they have a personal career development plan. This appears to be a higher percentage than expected, given the responses to the other questions related to educational interest and motivation. However, this question did not ask if the plan was written and/or formalized; as such, the responses to this question may include individuals who at a minimum have thought about their plans for further training and education.

Characteristics of the sample sites are shown in Table 3. On average, centers have a licensed capacity for 76 children, just under five classrooms, and an enrollment of 69 children. While centers have fewer enrolled children than they are licensed for, both group and family homes have more (probably due to school-age children or children who might not be enrolled for full-time child care). As for the age of children served, children age two through five are most likely to be enrolled in child care. Special needs children are most likely served by centers, not group or family homes. Staffing patterns are also consistent with common knowledge – centers average just under eleven paid staff, while group homes average just fewer than four. Approximately one-third of both centers and group homes have an assistant director. The turnover rate, indicated by the ratio of new staff to total number employed, is slightly higher for group child care (0.31) than it is for centers (0.22). Centers are most likely to be accredited (26.3%) while group homes are least likely (10%).

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Centers (N = 60)</th>
<th>Group Homes (N = 30)</th>
<th>Family Homes (N = 29)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Licensed Capacity (mean)</td>
<td>76.23</td>
<td>13.8</td>
<td>6.6</td>
</tr>
<tr>
<td>Number of Classrooms (mean)</td>
<td>4.95</td>
<td>2.1</td>
<td>N.A.**</td>
</tr>
<tr>
<td>Number of Children Enrolled (mean)</td>
<td>68.73</td>
<td>15.9</td>
<td>7.2</td>
</tr>
<tr>
<td>Age of Children (% of facilities with):</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Birth to 12 months</td>
<td>55.0</td>
<td>66.7</td>
<td>52.3</td>
</tr>
<tr>
<td>13–24 months</td>
<td>71.7</td>
<td>80.0</td>
<td>68.2</td>
</tr>
<tr>
<td>25–36 months</td>
<td>83.3</td>
<td>90.0</td>
<td>72.7</td>
</tr>
<tr>
<td>3–5 years</td>
<td>96.7</td>
<td>96.7</td>
<td>88.6</td>
</tr>
<tr>
<td>6–8 years</td>
<td>63.3</td>
<td>60.0</td>
<td>43.2</td>
</tr>
<tr>
<td>9 + years</td>
<td>48.3</td>
<td>33.3</td>
<td>22.7</td>
</tr>
<tr>
<td>Special needs (% yes)</td>
<td>61.7</td>
<td>16.7</td>
<td>11.4</td>
</tr>
<tr>
<td>Number of Paid Staff (mean)</td>
<td>10.93</td>
<td>3.6</td>
<td>N.A.</td>
</tr>
<tr>
<td>Assistant Director (% yes)</td>
<td>37.3</td>
<td>35.0</td>
<td>N.A.</td>
</tr>
<tr>
<td>Turnover Rate</td>
<td>0.22</td>
<td>0.31</td>
<td>N.A.</td>
</tr>
<tr>
<td>Accreditation Status (% yes)</td>
<td>26.3</td>
<td>10.0</td>
<td>22.5</td>
</tr>
</tbody>
</table>

** N.A. = Question not asked of this provider group.
Perceived Training Needs

The survey instrument distributed to child care staff asked both directors and teachers to identify the need for training in specified training topics. They were also asked to base their assessment on the need for training for child care providers, not just the importance of the topic alone. Table 4 summarizes the responses of these provider groups: center directors, center teachers, group providers, and family providers.

In examining Table 4, if we rank order the topics in terms of perceived priority, we see that the general topic area of supervision, motivation, and discipline/guidance of children is considered an area of very serious need for training. This topic is ranked at the top for all provider groups except family providers who rank it as the second most needed area of training. Family providers identify fostering social development (e.g., dealing with conflict) as the top priority for training. These two topics are closely related in that they both deal with the issue of behavior management—a serious concern for providers that is repeatedly expressed by them. A concern over behavior management is further supported by the data. All provider groups rank both topics as either first or second priority for training.

When all topics are listed in rank order (from topics that are a very serious need to topics that are not a priority), there is a high degree of consistency across all provider groups for center directors and teachers as well as home-based providers. The four areas consistently ranked as priority training topics are:

- supervision, motivation, and discipline/guidance of children
- social development (dealing with conflict)
- child development
- developmentally appropriate practice

In addition, family providers identify nutrition and infant/child development as important areas of training. Regardless of relative importance and rank order position, providers view none of the training topics specified on the research instrument as unimportant. The average scale value for these topics ranged between 1.28 and 2.53—thus, there is no topic area that is viewed as not a priority for training.

Training Needs as Observed via the Environment Rating Scales

In addition to the identification of training needs through the self-reports of child care staff, we are able to provide a more objective measure via the Harms

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Table 4. Perceived Need for Training in Selected Topic Areas.*

<table>
<thead>
<tr>
<th>Training Topic</th>
<th>Center Directors (N = 60)</th>
<th>Center Teachers (N = 546)</th>
<th>Group Providers (N = 100)</th>
<th>Family Providers (N = 44)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Child care business, management</td>
<td>2.19 (16)</td>
<td>2.36 (17)</td>
<td>2.43 (19)</td>
<td>2.03 (17)</td>
</tr>
<tr>
<td>Child care program development</td>
<td>1.77 (8)</td>
<td>1.87 (9)</td>
<td>2.04 (12)</td>
<td>1.67 (9)</td>
</tr>
<tr>
<td>Child development</td>
<td>1.63 (4)</td>
<td>1.57 (3)</td>
<td>1.72 (2)</td>
<td>1.59 (5)</td>
</tr>
<tr>
<td>Child/staff health</td>
<td>2.05 (14)</td>
<td>1.77 (5)</td>
<td>1.89 (7)</td>
<td>1.80 (12)</td>
</tr>
<tr>
<td>Development appropriate practice</td>
<td>1.13 (3)</td>
<td>1.55 (4)</td>
<td>1.81 (4)</td>
<td>1.66 (8)</td>
</tr>
<tr>
<td>Emergent literacy, children's literature</td>
<td>1.84 (9)</td>
<td>2.04 (15)</td>
<td>2.05 (13)</td>
<td>1.92 (14)</td>
</tr>
<tr>
<td>or literacy-based socio-dramatic play</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Emergent numeracy, science for young children</td>
<td>1.74 (6)</td>
<td>1.92 (11)</td>
<td>2.12 (16)</td>
<td>2.00 (16)</td>
</tr>
<tr>
<td>Fostering social development (e.g., dealing with conflict)</td>
<td>1.39 (2)</td>
<td>1.56 (2)</td>
<td>1.76 (3)</td>
<td>1.44 (1)</td>
</tr>
<tr>
<td>Inclusive/special needs education issues</td>
<td>1.74 (7)</td>
<td>1.78 (6)</td>
<td>2.05 (14)</td>
<td>1.69 (10)</td>
</tr>
<tr>
<td>Infant/Toddler child development/programming</td>
<td>1.88 (10)</td>
<td>1.78 (7)</td>
<td>1.89 (6)</td>
<td>1.51 (3)</td>
</tr>
<tr>
<td>Multicultural, gender sensitivity in programming for young children</td>
<td>1.93 (11)</td>
<td>2.02 (14)</td>
<td>2.01 (10)</td>
<td>1.95 (15)</td>
</tr>
<tr>
<td>Music, dance, movement for young children</td>
<td>1.98 (13)</td>
<td>1.93 (12)</td>
<td>2.02 (11)</td>
<td>1.89 (13)</td>
</tr>
<tr>
<td>Nutrition</td>
<td>2.27 (17)</td>
<td>1.99 (13)</td>
<td>1.88 (5)</td>
<td>1.57 (4)</td>
</tr>
<tr>
<td>Personal care routines (naptime, toileting, grooming)</td>
<td>2.46 (19)</td>
<td>2.12 (16)</td>
<td>2.11 (15)</td>
<td>1.60 (6)</td>
</tr>
<tr>
<td>Play</td>
<td>1.97 (12)</td>
<td>1.91 (10)</td>
<td>1.96 (8)</td>
<td>1.71 (11)</td>
</tr>
<tr>
<td>Supervision, motivation discipline/guidance of children</td>
<td>1.28 (1)</td>
<td>1.51 (1)</td>
<td>1.55 (1)</td>
<td>1.46 (2)</td>
</tr>
<tr>
<td>Working with parents/community services</td>
<td>1.73 (5)</td>
<td>1.85 (8)</td>
<td>2.00 (9)</td>
<td>1.64 (7)</td>
</tr>
<tr>
<td>Statewide conference on multiple topics</td>
<td>2.48 (20)</td>
<td>2.53 (20)</td>
<td>2.48 (20)</td>
<td>2.22 (20)</td>
</tr>
<tr>
<td>Regional conference on multiple topics</td>
<td>2.41 (18)</td>
<td>2.53 (19)</td>
<td>2.36 (18)</td>
<td>2.18 (19)</td>
</tr>
<tr>
<td>Mentoring, multiple topics</td>
<td>2.18 (15)</td>
<td>2.45 (18)</td>
<td>2.30 (17)</td>
<td>2.08 (18)</td>
</tr>
</tbody>
</table>

* Perceived need is indicated by the mean score for the provider group on a scale of 1 = a very serious need, 2 = important but not critical, 3 = more would be helpful, and 4 = not a priority; in addition, a rank order of training needs for each provider group is indicated in parentheses.
and Clifford Environment Rating Scales. By identifying areas where child care sites are weak (e.g., where average scores are less than 5), we can specify needed training topics. Table 5 summarizes the average scores for the individual items included in each of the environment rating scales (FDCRS, ITERS, and ECERS).

In analyzing the set of individual items on the three different Harms and Clifford Environment Rating Scales, we see that there are a number of areas that receive a very low rating—below a scale value of 4.00. Items rated this low indicate areas where special attention should be placed in the design and delivery of training. Across all three scales—FDCRS, ITERS, and ECERS—these items are consistently rated low: cultural awareness, personal grooming, dramatic (pretend) play, and sand and water play. Furthermore, these areas are rated low in two of the three environment rating scales: displays for children (FDCRS and ITERS), space alone (FDCRS and ECERS), helping infants/toddlers understand language (FDCRS and ITERS), art (ITERS and ECERS), and blocks (FDCRS and ITERS).

Overall, the ECERS reveals fewer areas of serious concern (only 16% of the items on this scale have a score below 4.00), while the ITERS reveals the most (46% of the ITERS items have a score below 4.00). This is consistent with national data on the environment rating scales (Phillips, 1987; Scar, 1994). Indeed, if we compare the overall average score for each scale, (FDCRS = 4.47; ITERS = 4.26; ECERS = 4.63), the ITERS has the lowest average score. This indicates a need for particular focus on infant/toddler training, a finding that is consistent with anecdotal evidence and comments.

On the other end of the continuum, there are a number of items on each of these scales that score above 5.00, indicating an assessment in the good range. Keeping in mind that there are not comparable items across all three scales, we consistently see these areas rated highly: nap/rest time, discipline/supervision, provision for parents, informal use of language with infants/toddlers, and health practice and/or policy. Consistent with our analysis of the items rated poorly, the ECERS fares the best. It has the highest percentage of items (38%) receiving a score above 5.00 (ITERS only has 26% of the items scoring above 5.00, while FDCRS has 23%). There are several points of interest in our examination of these ratings. First, it is noteworthy that the health area received such a positive evaluation. No doubt, concerns about health and safety are of primary importance to parents as well as officials who regulate child care. Second, the high rating for discipline/supervision is paradoxical given the consistent identification of this area by caregivers as one in which they most need training. This illustrates that caregivers are performing better in this area than they perceive; it also reveals that discipline/supervision

### Table 5. Average Score on Individual Environment Rating Scale Items.

<table>
<thead>
<tr>
<th>Scale Item</th>
<th>FDCRS (N=67)*</th>
<th>ITERS (N=36)</th>
<th>ECERS (N=57)*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Furnishings and Display</td>
<td>4.10</td>
<td>4.09</td>
<td>4.57</td>
</tr>
<tr>
<td>Furnishings for routine care</td>
<td>4.87</td>
<td>4.53</td>
<td>5.75</td>
</tr>
<tr>
<td>Use of furnishings for learning activities</td>
<td>-</td>
<td>4.44</td>
<td>4.14</td>
</tr>
<tr>
<td>Furnishings for relaxation and comfort</td>
<td>4.71</td>
<td>3.69</td>
<td>4.13</td>
</tr>
<tr>
<td>Room arrangement</td>
<td>-</td>
<td>3.86</td>
<td>4.74</td>
</tr>
<tr>
<td>Child-related display</td>
<td>3.01</td>
<td>3.92</td>
<td>4.08</td>
</tr>
<tr>
<td>Indoor space arrangement</td>
<td>4.11</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Active physical play</td>
<td>4.55</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Space to be alone</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. Infants/toddlers</td>
<td>3.43</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>b. 2 years and older</td>
<td>3.76</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Personal/Basic Care</td>
<td>4.84</td>
<td>4.66</td>
<td>4.59</td>
</tr>
<tr>
<td>Arriving/departing</td>
<td>6.15</td>
<td>5.56</td>
<td>4.71</td>
</tr>
<tr>
<td>Meals/snacks</td>
<td>4.72</td>
<td>3.93</td>
<td>4.40</td>
</tr>
<tr>
<td>Nap/rest</td>
<td>5.07</td>
<td>5.10</td>
<td>5.64</td>
</tr>
<tr>
<td>Diapering/toileting</td>
<td>4.13</td>
<td>3.62</td>
<td>5.05</td>
</tr>
<tr>
<td>Personal grooming</td>
<td>3.78</td>
<td>3.71</td>
<td>3.23</td>
</tr>
<tr>
<td>Health practice</td>
<td>5.17</td>
<td>4.21</td>
<td>-</td>
</tr>
<tr>
<td>Health policy</td>
<td>-</td>
<td>5.63</td>
<td>-</td>
</tr>
<tr>
<td>Safety practice</td>
<td>4.86</td>
<td>5.40</td>
<td>-</td>
</tr>
<tr>
<td>Safety policy</td>
<td>-</td>
<td>5.46</td>
<td>-</td>
</tr>
<tr>
<td>Language and Reasoning</td>
<td>4.54</td>
<td>4.37</td>
<td>4.82</td>
</tr>
<tr>
<td>Informal use of language</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. Infants/toddlers</td>
<td>5.01</td>
<td>5.00</td>
<td>-</td>
</tr>
<tr>
<td>b. 2 years and older</td>
<td>4.90</td>
<td>-</td>
<td>4.89</td>
</tr>
<tr>
<td>Helping children understand language</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. Infants/toddlers (books &amp; pictures)</td>
<td>3.47</td>
<td>3.74</td>
<td>-</td>
</tr>
<tr>
<td>b. 2 years and older</td>
<td>4.29</td>
<td>-</td>
<td>5.02</td>
</tr>
<tr>
<td>Helping children use language</td>
<td>4.45</td>
<td>-</td>
<td>4.99</td>
</tr>
<tr>
<td>Helping children reason</td>
<td>4.35</td>
<td>-</td>
<td>4.36</td>
</tr>
<tr>
<td>Fine/Gross Motor</td>
<td>N.A.</td>
<td>N.A.</td>
<td>5.11</td>
</tr>
<tr>
<td>Fine motor</td>
<td></td>
<td></td>
<td>5.41</td>
</tr>
<tr>
<td>Supervision (FM)</td>
<td></td>
<td></td>
<td>5.10</td>
</tr>
<tr>
<td>GM space</td>
<td></td>
<td></td>
<td>5.02</td>
</tr>
<tr>
<td>GM equipment</td>
<td></td>
<td></td>
<td>4.66</td>
</tr>
<tr>
<td>GM time</td>
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<td></td>
<td>5.21</td>
</tr>
<tr>
<td>Supervision (GM)</td>
<td></td>
<td></td>
<td>5.44</td>
</tr>
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</table>
Table 5. Continued.

<table>
<thead>
<tr>
<th>Scale Item</th>
<th>FDCRS (N = 67)*</th>
<th>ITERS (N = 36)</th>
<th>ECERS (N = 57)*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Creative/Learning Activities</td>
<td>4.12</td>
<td>3.39</td>
<td>4.46</td>
</tr>
<tr>
<td>Eye-hand coordination</td>
<td>4.48</td>
<td>4.67</td>
<td>-</td>
</tr>
<tr>
<td>Active physical play</td>
<td>-</td>
<td>3.53</td>
<td>-</td>
</tr>
<tr>
<td>Art</td>
<td>4.08</td>
<td>3.81</td>
<td>3.81</td>
</tr>
<tr>
<td>Music and movement</td>
<td>4.76</td>
<td>4.19</td>
<td>5.20</td>
</tr>
<tr>
<td>Sand and water play</td>
<td>2.60</td>
<td>3.07</td>
<td>3.75</td>
</tr>
<tr>
<td>Dramatic (pretend) play</td>
<td>3.74</td>
<td>3.07</td>
<td>3.62</td>
</tr>
<tr>
<td>Blocks</td>
<td>3.88</td>
<td>3.21</td>
<td>4.44</td>
</tr>
<tr>
<td>Use of T.V.</td>
<td>4.19</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Schedule of daily activities</td>
<td>4.59</td>
<td>-</td>
<td>4.93</td>
</tr>
<tr>
<td>Supervision of play indoors and outdoors</td>
<td>4.79</td>
<td>-</td>
<td>5.51</td>
</tr>
<tr>
<td>Cultural awareness</td>
<td>-</td>
<td>1.75</td>
<td>-</td>
</tr>
<tr>
<td><strong>Social Development</strong></td>
<td><strong>4.72</strong></td>
<td><strong>N.A.</strong></td>
<td><strong>4.20</strong></td>
</tr>
<tr>
<td>Tone</td>
<td>5.73</td>
<td>5.34</td>
<td></td>
</tr>
<tr>
<td>Discipline</td>
<td>5.59</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Cultural Awareness</td>
<td>2.85</td>
<td>2.96</td>
<td></td>
</tr>
<tr>
<td>Space (alone)</td>
<td>-</td>
<td>3.60</td>
<td></td>
</tr>
<tr>
<td>Free play</td>
<td>-</td>
<td>4.53</td>
<td></td>
</tr>
<tr>
<td>Group time</td>
<td>-</td>
<td>4.33</td>
<td></td>
</tr>
<tr>
<td>Exceptional provisions</td>
<td>-</td>
<td>4.69</td>
<td></td>
</tr>
<tr>
<td><strong>Interaction</strong></td>
<td><strong>N.A.</strong></td>
<td><strong>4.98</strong></td>
<td><strong>N.A.</strong></td>
</tr>
<tr>
<td>Peer interaction</td>
<td>4.93</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adult child interaction</td>
<td>4.99</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Discipline</td>
<td>5.01</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Program Structure</strong></td>
<td><strong>N.A.</strong></td>
<td><strong>4.53</strong></td>
<td><strong>N.A.</strong></td>
</tr>
<tr>
<td>Schedule of daily activities</td>
<td>3.75</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Supervision of daily activities</td>
<td>4.71</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Staff cooperation</td>
<td>4.98</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Provisions for exceptional children</td>
<td>5.30</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Adult Needs</strong></td>
<td><strong>5.17</strong></td>
<td><strong>4.28</strong></td>
<td><strong>4.80</strong></td>
</tr>
<tr>
<td>Adult personal needs</td>
<td>-</td>
<td>3.31</td>
<td>4.11</td>
</tr>
<tr>
<td>Opportunities for professional growth</td>
<td>4.79</td>
<td>3.57</td>
<td>4.50</td>
</tr>
<tr>
<td>Adult meeting area</td>
<td>-</td>
<td>4.94</td>
<td>5.10</td>
</tr>
<tr>
<td>Provisions for parents</td>
<td>-</td>
<td>5.35</td>
<td>5.51</td>
</tr>
<tr>
<td>Relationships with parents</td>
<td>5.37</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Balancing personal and caregiving responsibilities</td>
<td>5.28</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

* This is the weighted N since there were observations made in more than one type of child care (i.e. family, group, or center).

** N.A. = Question not applicable for this environment rating scale. Spaces where there are no applicable scores are indicated by "--".

Table 6. Factors Affecting the Selection of Training.*

<table>
<thead>
<tr>
<th>Selection Factors</th>
<th>Center Directors (N = 60)</th>
<th>Center Teachers (N = 546)</th>
<th>Group Providers (N = 100)</th>
<th>Family Providers (N = 44)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Location/convenience</td>
<td>1.19 (5)</td>
<td>1.27 (5)</td>
<td>1.29 (3)</td>
<td>1.08 (3)</td>
</tr>
<tr>
<td>Session length</td>
<td>1.51 (10)</td>
<td>1.70 (12)</td>
<td>1.71 (11)</td>
<td>1.54 (10)</td>
</tr>
<tr>
<td>Meet state requirements</td>
<td>1.24 (7)</td>
<td>1.40 (8)</td>
<td>1.33 (5)</td>
<td>1.34 (6)</td>
</tr>
<tr>
<td>Quality of previous training</td>
<td>1.41 (8)</td>
<td>1.39 (7)</td>
<td>1.49 (8)</td>
<td></td>
</tr>
<tr>
<td>Cost of training</td>
<td>1.53 (11)</td>
<td>1.66 (11)</td>
<td>1.50 (9)</td>
<td>1.58 (11)</td>
</tr>
<tr>
<td>Scheduled times of training</td>
<td>1.13 (4)</td>
<td>1.31 (6)</td>
<td>1.36 (6)</td>
<td>1.03 (1)</td>
</tr>
<tr>
<td>Interest in topic/contents</td>
<td>1.10 (1)</td>
<td>1.15 (2)</td>
<td>1.15 (1)</td>
<td>1.21 (4)</td>
</tr>
<tr>
<td>Networking opportunities</td>
<td>1.75 (12)</td>
<td>1.81 (13)</td>
<td>1.82 (13)</td>
<td>1.66 (12)</td>
</tr>
<tr>
<td>Training organization</td>
<td>1.76 (13)</td>
<td>1.65 (10)</td>
<td>1.72 (12)</td>
<td>1.69 (13)</td>
</tr>
<tr>
<td>The trainer</td>
<td>1.48 (9)</td>
<td>1.51 (9)</td>
<td>1.66 (10)</td>
<td>1.54 (9)</td>
</tr>
<tr>
<td>Offers practical solutions</td>
<td>1.19 (6)</td>
<td>1.25 (4)</td>
<td>1.32 (4)</td>
<td>1.24 (5)</td>
</tr>
<tr>
<td>Helps understand children</td>
<td>1.12 (3)</td>
<td>1.09 (1)</td>
<td>1.16 (2)</td>
<td>1.08 (2)</td>
</tr>
<tr>
<td>Professional development</td>
<td>1.10 (2)</td>
<td>1.22 (3)</td>
<td>1.37 (7)</td>
<td>1.35 (7)</td>
</tr>
<tr>
<td>Sent by director</td>
<td>N.A.**</td>
<td>1.91 (14)</td>
<td>1.87 (14)**</td>
<td>N.A.**</td>
</tr>
</tbody>
</table>

* Importance of factors in the selection of training is indicated by the mean score for the provider group on a scale of 1 = very important, 2 = somewhat important, and 3 = not important. In addition, the rank order of the factors in terms of importance is indicated in parentheses.

** N.A. = Not asked of this provider group.

*** This represents the response from the group teachers only.

Professional Development and The Quality of Child Care is perhaps one of the most challenging areas in child care and something for which caregivers think they need constant help and support.

Selection of Training

Providers were asked to indicate the importance of a number of factors in their selection of training. In Table 6 we see, again, there is a high degree of consistency across all provider groups. Providers indicate that their selection is based primarily on their interest in a topic and if a topic helps in understanding children. Furthermore, center staff (directors and teachers) identify opportunities for professional development as important. All provider groups, except center directors, rank training that offers practical solutions within the top five on their list of factors that are important in the
selection of training. Center directors mention scheduled times for training as important. Similarly, home-based providers mention scheduled times for training or location/convenience as important factors affecting their selection of training. These priority rankings are congruent with the role responsibilities of center directors and teachers and home-based providers. Directors are responsible for the scheduling of staff at their child care facility, while home-based providers must participate in training that is offered during nonbusiness hours – hence the importance of when training is scheduled. On the other hand, teachers deal with the day-to-day child care activities for which they want practical guidance.

However, all of the factors that might affect selection of training are considered at least somewhat important by child care providers. (Note that none of the factors have a mean score above 2.0.) But, in terms of priority, the factors having the least priority across all provider groups are networking opportunities, training organization, session length, cost of training, and trainer. The relative unimportance of the cost of training is to be expected. The Pennsylvania child care training system provides training opportunities at no cost, or for a minimal registration fee, therefore cost is not a critical issue. As for the trainer and training organization, it may be that providers are satisfied with current training organizations and trainers (as expressed elsewhere in these data and also in the participant evaluation forms completed for each training session). These data indicate the trainer or training organization may not be as important as other factors in the selection of training.

What is of interest is the relative unimportance of networking opportunities. Anecdotally, we often hear that the opportunity to meet and talk with other child care providers is highly valued. On closer inspection, we see that family providers (the provider group that is most isolated from peers), are more likely to consider networking opportunities as important than are the other provider groups. Half of the family providers indicate that networking is a very important factor in their selection of training, while only around one-third of the other provider groups indicate this.

Center teachers also were asked to indicate the importance of being sent by the director in selection of training. In comparison to other factors, being sent by the director is relatively unimportant – it is ranked at the bottom. Regardless, approximately one-third of the teachers in centers indicate that being sent by the director is a very important factor. Ideally, directors of child care centers should be working with staff to establish professional development plans that meet the individual needs of workers. However, this question, as asked, does not identify the reason why a director sends staff to a particular training – i.e. whether the selected training corresponds with professional development needs of staff or whether training is offered at a convenient time and place.

When directors were asked about how decisions are made regarding staff training, just under half of center directors (46.6%) indicated that they "guide the selection but the staff make the final decision." Whereas, in the group child care situation, 60% of group directors indicated this.

Having a personal plan for career development is related to this decision-making process and the selection of child care training. Whether or not staff have such plans was assessed by asking directors "What percentage of your child care staff have personal plans for career development in early child care and education?" Center directors, on average, indicate that over half (51.9%) of staff have personal plans. In group child care, directors report that only 24.2% of staff have personal career development plans. A much higher percentage (71.1%) of family providers have a plan for personal development as a child care provider. This question does not ask for specific details, therefore the interpretation of what constitutes a plan probably varies considerably.

Evaluation of Training

The appropriateness, usefulness, applicability, and effectiveness of training in achieving learning objectives, as perceived by providers, were used as one means to evaluate the training system. Providers were asked for an overall assessment of training in which they participated, knowing that many have participated in a number of training opportunities over the past few years (see Fig. 1).

A majority of all provider groups consider the training to be either very appropriate or somewhat appropriate. In comparison, group providers are more likely than the others to consider the training appropriate (94.6%), while family providers are least likely (89.2%).

Providers also positively assess the usefulness of training. More than four-fifths of each provider group consider the training somewhat or very helpful. Comparatively, home-based providers are most likely to consider the training useful (group=89.1% and family=89.2%), while center directors are least likely (87.5%).

The applicability of training (or the knowledge and skills learned) to the work environment should be an important feature of any training system if it is to have an impact. It is impressive that a substantial majority of providers (over 90%) indicate that they could apply all, a lot, or some of what they learned in the training to current work.
To assess the perceived effectiveness of training, providers were asked to indicate the extent to which the training goal(s) were achieved, that is, the extent to which they learned the material. As with applicability of training, almost all providers (over 90%) respond that they learned at least some of the material. A slightly smaller percentage of family providers indicate this (91.9% vs. over 96% for the other provider groups).

Overall, the training system is viewed positively by provider groups, as evidenced by response to questions about appropriateness, usefulness, applicability, and effectiveness in achieving learning objectives. The providers consider the training appropriate for their level of knowledge and skill, find it helpful in their current work, indicate they are able to apply what they have learned, and feel training goals have been achieved.

This positive assessment also corresponds with their response when asked about level of interest in training and if more training would be (see Fig. 2). As with the other evaluative factors, the level of interest is high among teachers, with over 80% of center and group teachers indicating they are either interested or very interested in taking training. Furthermore, directors are on target in assessing levels of interest of their staff. As further evidence of the positive evaluation of the training by providers, a substantial percentage (86–100%) indicate that attending more workshops or training will help them in their work.

A final evaluative measure used in assessing the current training system asked about the perceived helpfulness of the various training methods used in the Pennsylvania Child Care/Early Childhood Development Training System. Only directors and family providers were asked about this. Table 7 summarizes the responses for center directors, group directors, and family providers. On-site training ranks as the most helpful method by the directors of centers and group homes, while family providers rank it as second most helpful. Center directors and family providers also positively assess workshops. While satellite and video methods of training may be cost effective and efficient in reaching providers in more rural areas, both these methods of training are viewed as less helpful than other methods. Interestingly, both family providers and group directors express a more positive view of these two methods than do center directors.

Barriers to Training

Several factors may limit child care providers from attending training. Providers were asked to indicate the importance of a number of factors that might prevent them from attending training or workshops (see Fig. 3).
Table 7. Perceived Helpfulness of Training Methods.*

<table>
<thead>
<tr>
<th>Training Method</th>
<th>Center Directors (N = 60)</th>
<th>Group Directors (N = 30)</th>
<th>Family Providers (N = 44)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Workshop</td>
<td>1.26 (2)</td>
<td>1.52 (2)</td>
<td>1.16 (1)</td>
</tr>
<tr>
<td>Satellite</td>
<td>2.33 (6)</td>
<td>2.07 (6)</td>
<td>1.84 (6)</td>
</tr>
<tr>
<td>Video</td>
<td>1.92 (5)</td>
<td>1.56 (5)</td>
<td>1.60 (4)</td>
</tr>
<tr>
<td>On-site Training</td>
<td>1.21 (1)</td>
<td>1.39 (1)</td>
<td>1.42 (2)</td>
</tr>
<tr>
<td>Conference</td>
<td>1.57 (4)</td>
<td>1.48 (3)</td>
<td>1.55 (3)</td>
</tr>
<tr>
<td>Mentoring</td>
<td>1.38 (3)</td>
<td>1.47(4)</td>
<td>1.78 (5)</td>
</tr>
</tbody>
</table>

* Perceived helpfulness is indicated by the mean score for those who have experienced a method of training, on a scale of 1 = very helpful, 2 = somewhat helpful, and 3 = not helpful. In addition, a rank order of the methods is indicated in parentheses.

Lack of child care for their own children while attending training is considered important as a barrier only by family providers. This is another expected finding since family providers are most likely to have to attend training outside of work hours, necessitating the need to find care for their own children while attending training.

Contrary to what we might expect given the current lack of status and minimal reward system for child care providers, having no long term gains or rewards for training is not considered a very important barrier by provider groups. However, center directors, in comparison to other provider groups, were more likely to perceive this as an important barrier.

Having no one to watch the children during the child care hours is seen as the most significant barrier to training by all provider groups. Center directors and family child care providers, however, are more likely to indicate this as a very important factor than are teachers and group providers. This is to be expected, since directors and family providers are responsible for finding substitutes in their child care settings.

In identifying other barriers to training, we can also examine the reward system attached to training. Providers were asked, "Do you receive any compensation for attending relevant training?" Figure 4 shows the types of compensation received by the center and group child care providers. Few providers receive any type of compensation, i.e. being paid while in training, receiving compensatory time, or being reimbursed for expenses. Center directors appear to fare better than other provider groups – 55.9% indicate that they are paid while in training. This can be interpreted that they are more likely to attend relevant training during the work hours.
* Importance of barrier is indicated by the mean score of the provider group on a scale of 1-very important, 2=somewhat important, and 3=not important.

Fig. 3. Barriers to Training.*

* Percent indicating “yes” for each of these types of compensation that they receive for relevant training.

Fig. 4. Compensation for Attending Relevant Training.*
The Work Environment of Child Care Facilities

The quality of work life is not only an indicator of one type of quality within a child care environment, but it is an important factor that can influence the overall quality of care for young children, as well. As stated previously, we have used Jorde-Bloom's Early Childhood Work Environment Survey (ECWES) to assess a number of dimensions of the work environment within child care centers. The ECWES\textsuperscript{13} includes measurements of:

- Ten dimensions of organizational climate (collegiality, professional growth, supervisor support, clarity, reward system, decision making, goal consensus, task orientation, physical setting, and innovativeness);
- The importance that staff assign to each dimension (summary of worker values);
- The staff's overall commitment to the center;
- How the current work environment resembles the staff's ideal;
- The importance of various educational goals and objectives;
- The degree of influence of the teaching staff regarding various organizational dimensions.

Organizational Climate

The ten dimensions of organizational climate are shown in Fig. 5. In analyzing the scale values, which can range between 0 and 10, we see that the dimension of professional growth ranks at the bottom (3.94), followed by reward system (5.88) and clarity (5.91). This indicates that overall, staff in centers do not perceive many opportunities for professional growth, they do not feel that pay and fringe benefits are fair and equitably distributed, and they feel that communication about policies and procedures is unclear. These results are similar to national data where professional growth opportunities and reward systems are evaluated poorly by most child care staff (Jorde-Bloom, 1996).

It is important to determine what factors, if any, are associated with these ten dimensions of organizational climate. Table 8 provides a summary from an analysis of relationships between each of the organizational climate dimensions and a series of factors. A number of director characteristics are examined first. In addition, characteristics of teachers (aggregated per site) and overall site characteristics are analyzed.

Overall, the average age of teachers is significantly related to all dimensions of organizational climate. Centers with older workers have a more positive work environment. Correspondingly, two other factors that are closely related
Table 8. Factors Associated with Organizational Climate.

<table>
<thead>
<tr>
<th>Factor</th>
<th>Collegiality</th>
<th>Professional Growth</th>
<th>Supervisor Support</th>
<th>Clarity</th>
<th>Reward System</th>
<th>Decision Making</th>
<th>Goal Consensus</th>
<th>Task Orientation</th>
<th>Physical Setting</th>
<th>Innovativeness</th>
</tr>
</thead>
<tbody>
<tr>
<td>Director Background</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>-0.005</td>
<td>0.27*</td>
<td>-0.09</td>
<td>0.02</td>
<td>0.10</td>
<td>-0.14</td>
<td>0.05</td>
<td>0.03</td>
<td>0.11</td>
<td>0.05</td>
</tr>
<tr>
<td>Educational level</td>
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<td>0.17</td>
<td>0.15</td>
<td>0.08</td>
<td>0.14</td>
<td>0.03</td>
<td>0.02</td>
<td>0.17</td>
<td>0.14</td>
<td>0.14</td>
</tr>
<tr>
<td>Years in school</td>
<td>0.08</td>
<td>0.44***</td>
<td>0.20</td>
<td>0.18</td>
<td>0.30*</td>
<td>0.24</td>
<td>0.19</td>
<td>0.26*</td>
<td>0.30*</td>
<td>0.26*</td>
</tr>
<tr>
<td>Full-time/part-time</td>
<td>0.26*</td>
<td>0.40**</td>
<td>0.23</td>
<td>0.17</td>
<td>0.40**</td>
<td>0.19</td>
<td>0.12</td>
<td>0.26*</td>
<td>0.30*</td>
<td>0.14</td>
</tr>
<tr>
<td>Salary</td>
<td>-0.23</td>
<td>-0.08</td>
<td>-0.06</td>
<td>-0.18</td>
<td>-0.18</td>
<td>-0.32*</td>
<td>0.03</td>
<td>-0.13</td>
<td>-0.25</td>
<td>0.08</td>
</tr>
<tr>
<td>Long-term educational goal</td>
<td>-0.28</td>
<td>-0.35***</td>
<td>-0.07</td>
<td>-0.13</td>
<td>-0.15</td>
<td>0.04</td>
<td>-0.12</td>
<td>0.03</td>
<td>-0.06</td>
<td>0.13</td>
</tr>
<tr>
<td>GPA average</td>
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<td>0.07</td>
<td>0.03</td>
<td>0.01</td>
<td>-0.12</td>
<td>0.02</td>
<td>0.04</td>
<td>-0.15</td>
<td>-0.03</td>
</tr>
<tr>
<td>Training hours/year</td>
<td>-0.13</td>
<td>0.02</td>
<td>-0.05</td>
<td>-0.08</td>
<td>-0.08</td>
<td>-0.01</td>
<td>-0.02</td>
<td>0.12</td>
<td>0.07</td>
<td>0.06</td>
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<tr>
<td>Annual training goal</td>
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<td>0.18</td>
<td>-0.14</td>
<td>-0.05</td>
<td>-0.06</td>
<td>-0.14</td>
<td>-0.07</td>
<td>-0.11</td>
<td>-0.17</td>
<td>0.02</td>
</tr>
<tr>
<td>Aggregate Teacher Characteristics</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Average age of teachers/site</td>
<td>0.38**</td>
<td>0.43**</td>
<td>0.24*</td>
<td>0.23*</td>
<td>0.28*</td>
<td>0.18</td>
<td>0.16</td>
<td>0.17</td>
<td>0.16</td>
<td>0.24</td>
</tr>
<tr>
<td>Average educational level</td>
<td>0.03</td>
<td>0.25</td>
<td>0.04</td>
<td>-0.07</td>
<td>0.01</td>
<td>-0.03</td>
<td>0.09</td>
<td>-0.03</td>
<td>0.09</td>
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<tr>
<td>Average years in field</td>
<td>0.74</td>
<td>0.36***</td>
<td>0.30*</td>
<td>0.26*</td>
<td>0.48**</td>
<td>0.21</td>
<td>0.06</td>
<td>0.30</td>
<td>0.30</td>
<td>0.00</td>
</tr>
<tr>
<td>Average years in present job</td>
<td>0.36**</td>
<td>0.38**</td>
<td>0.32*</td>
<td>0.25**</td>
<td>0.45**</td>
<td>0.21</td>
<td>0.06</td>
<td>0.30</td>
<td>0.30</td>
<td>0.00</td>
</tr>
<tr>
<td>Average teacher salary</td>
<td>0.04</td>
<td>0.12</td>
<td>0.14</td>
<td>0.00</td>
<td>0.09</td>
<td>0.00</td>
<td>0.07</td>
<td>0.09</td>
<td>0.09</td>
<td>0.09</td>
</tr>
<tr>
<td>Average long-term educational goal</td>
<td>0.15</td>
<td>0.52***</td>
<td>0.13</td>
<td>0.27*</td>
<td>0.16</td>
<td>0.15</td>
<td>0.23</td>
<td>0.29*</td>
<td>0.18</td>
<td>0.24</td>
</tr>
<tr>
<td>Average training hours/year</td>
<td>0.01</td>
<td>0.33***</td>
<td>0.01</td>
<td>0.06</td>
<td>0.05</td>
<td>0.06</td>
<td>0.08</td>
<td>0.05</td>
<td>0.05</td>
<td>0.09</td>
</tr>
<tr>
<td>Average teacher interest in training</td>
<td>-0.09</td>
<td>0.11</td>
<td>0.23</td>
<td>0.22</td>
<td>0.09</td>
<td>-0.18</td>
<td>-0.13</td>
<td>0.10</td>
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<td>-0.20</td>
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<tr>
<td>Licensed capacity</td>
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<td>0.18</td>
<td>-0.14</td>
<td>-0.05</td>
<td>-0.03</td>
<td>-0.07</td>
<td>-0.09</td>
<td>-0.11</td>
<td>-0.08</td>
<td>-0.06</td>
</tr>
<tr>
<td>Number of classrooms</td>
<td>-0.09</td>
<td>0.23**</td>
<td>-0.05</td>
<td>-0.05</td>
<td>0.02</td>
<td>0.11</td>
<td>0.00</td>
<td>0.06</td>
<td>0.11</td>
<td>0.15</td>
</tr>
<tr>
<td>Turnover</td>
<td>-0.13*</td>
<td>-0.35***</td>
<td>-0.40**</td>
<td>-0.26</td>
<td>-0.20</td>
<td>-0.20</td>
<td>-0.30*</td>
<td>-0.38**</td>
<td>-0.25</td>
<td>-0.29*</td>
</tr>
<tr>
<td>Accreditation status</td>
<td>-0.18</td>
<td>-0.33***</td>
<td>-0.16</td>
<td>-0.24</td>
<td>-0.38**</td>
<td>-0.13</td>
<td>-0.28*</td>
<td>-0.25</td>
<td>-0.29*</td>
<td>-0.20</td>
</tr>
<tr>
<td>Average training hours/year</td>
<td>-0.07</td>
<td>0.17</td>
<td>-0.16</td>
<td>-0.18</td>
<td>0.14</td>
<td>-0.13</td>
<td>-0.12</td>
<td>-0.06</td>
<td>-0.03</td>
<td>0.12</td>
</tr>
</tbody>
</table>

* p<0.05; ** p<0.01; *** p<0.001.

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Professional Development and The Quality of Child Care

Summary of Worker Values

The previous analysis of organizational climate gives us a picture of how child care centers face of each of these dimensions. We see that opportunities for professional growth is highest among the 60% of child care centers that reported most important aspects of their work. The dimension of organizational climate is most important aspects of their work. The dimension of organizational climate is highest among the 60% of child care centers that reported most important aspects of their work. The dimension of organizational climate is highest among the 60% of child care centers that reported most important aspects of their work. The dimension of organizational climate is highest among the 60% of child care centers that reported most important aspects of their work. The dimension of organizational climate is highest among the 60% of child care centers that reported most important aspects of their work.
Summary of How Current Work Environment Resembles Ideal

As a way of understanding the discrepancy between ideal and real work conditions, child care workers were asked, "If you could design the ideal job, how close would your present position resemble this ideal position with respect to the following?" Responses range between not at all like my ideal to is my ideal. Based on this assessment, Figure 7 illustrates that the greatest discrepancy is in the reward system. There is a wide gap between what child care workers are paid versus what they think they should be paid. Given their current low salaries, this is an accurate appraisal on their part. The autonomy of staff to make decisions or express opinions on important issues is another area where child care staff feel that work environments least resemble the ideal.

The smallest gap between the ideal environment and the real one experienced by child care workers is in the areas of collegiality and supervisor support. As far as opportunities for professional growth, the discrepancy between ideal and real falls mid-range on the continuum.

Importance of Educational Goals and Objectives

Early childhood programs can have a number of educational goals and objectives – but the priority given to each can vary across programs. Figure 8 shows how these educational goals and objectives are ranked in Pennsylvania child care centers. Consistent with developmentally appropriate practice in the early childhood field, the greatest emphasis is on helping children to develop positive self concepts and self esteem while the least emphasis is placed on helping children develop concepts needed for reading and math.

Degree of Influence of Teaching Staff Regarding Organizational Decisions

Perceptions of workers regarding the degree of influence of teaching staff with respect to various organizational decisions provides a fuller understanding of the decision making dimension of organizational climate. Staff were asked how much influence they have (very little to considerable influence) in ordering materials and supplies, interviewing and hiring staff, determining program objectives, training new aides or teachers, and planning daily activities. Figure 9 depicts the difference between what directors perceive is the degree of influence versus what teachers perceive is the degree of influence. Not unexpectedly, teachers do not perceive that they have as much influence as what directors say they do. This discrepancy also points to an area where improvement efforts can be focused.
Fig. 7. Summary of How Current Work Environment Resembles Ideal.*

*Mean value for center staff on a scale of 1 = not like my ideal to 5 = like my ideal when asked "If you could design the ideal job, how close would your present position resemble your ideal work environment with respect to the following?"

Fig. 8. Importance of Organizational Goals.*

*Mean value of importance on a scale of 1 = most important and 6 = least important.
directors have a slightly higher level of commitment than teachers – 8.6 for directors compared to 7.5 for teaching staff. Together this gives us an overall value of 7.6 for child care centers.

**Quality of Care**

**Quality of Care as Assessed through the Environment Rating Scales**

A previous section discussed results from observations of child care sites and the scale values for each individual item on the FDCRS, ITERS, and ECERS. That discussion focused on these data as a means to assess training needs. Our focus now shifts to the question about overall quality of care and its changes over the years, based on earlier studies conducted in Pennsylvania in 1984 (Kontos & Fiene, 1987) and in 1989 (Fiene & Melnick, 1991).

Overall, average ECERS scores have improved through the years, although the changes are not statistically significant, increasing from 3.78 in 1984 to 4.27 in 1989 to 4.63 in 1996. An analysis of FDCRS scores shows a marked (statistically significant, p<0.05) improvement from 1989, increasing from 3.80 in 1989 to 4.47 in 1996. Several observations can be made in comparing 1996 with 1989 and 1984 data sets. While program quality scores on the ECERS and FDCRS have improved over the 12-year time frame, the bad news is that quality scores, on average, are still at the mediocre level. The ITERS score in 1996 is even worse (4.23) and is a major concern. There are no comparable data for the ITERS from the 1989 or 1984 research studies.

Overall, Pennsylvania child care has improved, but it is still not in the good or excellent range. National and international data from research studies are very similar with ranges from 3.40 to 4.30 for family child care homes with little training to 5.22 for child care centers that are accredited (Phillips, 1987).

What are some reasons for the improvements? Two major interventions occurred during this 12-year time period. Both occurred at approximately the same time so it is difficult to determine the contribution of each to the overall improvement in quality. In 1992 new child care regulations were promulgated and the new comprehensive PA CC/EC Training System was implemented. New regulations were an improvement over existing regulations, but the regulations deal primarily with basic health and safety issues. Although this will contribute to overall quality, it will not be a major contributor (Fiene & Melnick, 1991). What has been and continues to be a major contributor is the training system that has been implemented. When data are compared from the ECERS and FDCRS, family child care homes improved significantly more than child care centers. The home-based training system has been in place for twice as long as the center-based system. This is a very encouraging result.
Factors Associated with the Quality of Child Care

The previous analysis presents an overall picture of the quality of child care in Pennsylvania and the progress made in improving quality. Analysis presented in this section examines the current data to determine what factors are significantly related to the quality of care. Part of this analysis will be based on a data set that has matched the environment rating scales with the child care providers that were observed. This data set establishes the most direct link between an indicator of quality and the set of factors that might be associated with it (e.g., background characteristics of the caregiver, level of training of the caregiver, and caregiver's assessment of organizational climate). Other parts of this analysis will be based on a site level data set where aggregate values for most of the variables have been created to represent the site, overall. Where necessary, data have been weighted to adjust for the different probabilities of sample selection (i.e., the FDCRS included both family and group homes while the ECERS included both centers and group homes, necessitating that these analyses be based on weighted data). This analysis, which will include both bivariate correlation and multivariate regression analyses, will be presented separately for each of the three environment rating scales.

Table 9 provides a summary of results of a series of bivariate correlations between the measure of quality (i.e., either the FDCRS, ITERS, or ECERS average score) and a set of factors hypothesized to be related to quality (e.g., caregiver background characteristics, training experience, and assessment of organizational climate; for family providers, in lieu of organizational climate, an indicator of their connectedness to a child care network is used).

Bivariate analysis of the FDCRS finds four factors that are significantly correlated with quality of family child care. Family caregivers that are younger and have higher long-term educational goals are more likely to provide a higher quality of care. The other factors are measures of a family provider’s assessment of the current training system. Providers who evaluate the current system of training as inappropriate to their skill level and not useful for their work as a family caregiver are more likely to provide a higher quality of care. This is not as unexpected as it sounds. It is likely that those providers who are already providing quality care do not find as much benefit from the current training system that focuses most of its attention on entry level skills. In an attempt to further analyze this unusual finding, we examined the relationship between hours of training and evaluation of training by providers. We see that providers who have more hours of training are also more likely to rate the current system positively in terms of goal achievement \( (B = -0.24, p \leq 0.07) \), appropriate skill level \( (B = -0.28, p \leq 0.03) \), and usefulness \( (B = -0.45, p \leq 0.000) \).

\[
\begin{array}{cccc}
\text{Factor} & \text{FDCRS} & \text{ITERS} & \text{ECERS} \\
\text{(N = 67)} & (N = 36) & (N = 57) & \\
\hline
\text{Caregiver Background} & & & \\
\text{Age} & -0.30^{**} & 0.13 & 0.05 \\
\text{Educational level} & 0.003 & 0.14 & 0.11 \\
\text{Years in field} & -0.20 & 0.25 & 0.04 \\
\text{Salary} & 0.19 & 0.43^{**} & 0.36^{**} \\
\text{Long term educational goal} & 0.27^{**} & 0.07 & -0.09 \\
\hline
\text{Training Characteristics} & & & \\
\text{Annual educational goal} & 0.12 & 0.19 & 0.14 \\
\text{Training hours per year} & -0.03 & 0.02 & -0.09 \\
\text{CDA status} & 0.05 & 0.005 & 0.03 \\
\text{Training helpful in work} & 0.08 & -0.16 & -0.03 \\
\text{Evaluation of training system} & & & \\
\text{a. appropriateness} & 0.29^{**} & -0.01 & 0.03 \\
\text{b. goal achievement} & 0.11 & 0.07 & -0.10 \\
\text{c. usefulness} & 0.28^{**} & 0.08 & -0.05 \\
\text{d. applicability} & -0.02 & -0.16 & -0.08 \\
\hline
\text{Organizational Climate} & \text{N.A.} & & \\
\text{Overall commitment} & 0.01 & 0.14 & \\
\text{Collegiality} & -0.31 & -0.003 & \\
\text{Professional growth} & 0.15 & 0.41^{**} & \\
\text{Supervisor support} & -0.29 & 0.22 & \\
\text{Clarity} & 0.06 & 0.32^{*} & \\
\text{Reward system} & -0.27 & 0.29^{*} & \\
\text{Decision making} & -0.24 & 0.17 & \\
\text{Goal consensus} & -0.18 & 0.32^{*} & \\
\text{Task orientation} & 0.05 & 0.30^{*} & \\
\text{Physical setting} & 0.20 & 0.21 & \\
\text{Innovativeness} & -0.07 & 0.23 & \\
\text{Connectedness} & & & \\
\text{(Family Child Care Only)} & & & \\
\text{N.A.} & & N.A. & \\
\hline
\end{array}
\]

† This is the weighted N since there were observations made in more than one type of child care (i.e., family, group, or center).

** N.A. = Not applicable

* \( p \leq 0.05 \) ; ** \( p \leq 0.01 \).

Our bivariate analysis of the ITERS finds only salary level of the caregiver to be significantly related to quality of infant/toddler care. Caregivers with higher salaries provide higher quality infant/toddler care. The bivariate analysis of the ECERS reveals a number of factors that are significantly correlated with
quality of child care: salary and organizational climate factors of professional growth, clarity, reward system, goal consensus, and task orientation. Thus, the caregivers that provide high quality early childhood care are more likely to:

- have higher salaries;
- indicate that their center has opportunities for professional growth;
- feel that communication at their center is good and that work schedules, job descriptions, and rules are clear and well-defined;
- indicate that the pay and fringe benefits are fair and equitably distributed in their center;
- indicate that staff at their center agree on school philosophy, are united in their approach, and are committed to program goals and objectives;
- believe that they work hard but still have time to relax, that program procedures are efficient, and that meetings are productive.

In an analysis of the site level data set, we created an overall quality of care variable as an indicator of child care quality. In a multivariate analysis of these data, we then determined what site level factors significantly contribute to the variance in quality of care at the site level. Initially, we did not include any of the work environment variables (Bloom items) since that would result in excluding all home-based providers from the analysis. Our analysis reveals that size and turnover are significant factors and explain 19% of the variance in quality of care. Results from the regression analysis are: class number (B = 0.11, p < 0.0053) and turnover (B = -1.08, p = 0.0216). Thus, sites with more classrooms and lower turnover have a higher quality of care.

When we add the Bloom items on organizational climate (thereby eliminating all home-based providers from the analysis), we find that only opportunity for professional growth independently contributes to the variance of quality of care at child care sites (the majority of which are centers). The results from the regression analysis for professional growth are B = 0.45, p < 0.0000. Forty percent of the variation is explained by this factor. As we hypothesize, child care facilities that have more opportunities for professional growth have a higher overall quality of care.

CONCLUSIONS AND POLICY IMPLICATIONS

What can we conclude as a result of this research and what are the implications for public policy? There are numerous issues addressed and volumes of data analyzed. First, we can examine the overall conclusions with regard to the current training system – how it is evaluated and what the training needs are.

Overall, the training system is viewed positively by the provider groups, as evidenced by their response to questions about appropriateness, usefulness, applicability, and effectiveness in achieving learning objectives. Furthermore, providers express a high level of interest in the training and, for the most part, feel that additional training will help them in their work. When directors of centers and home-based providers are asked about the particular methods of training that they perceive to be most helpful to them and their staff, training methods that provide direct contact with a trainer (e.g., on-site training and workshops) are viewed as most helpful. Methods where the contact is indirect (e.g., video and satellite training) are viewed as least helpful. This is understandable, although the policy implications of this are not to abandon some of the more indirect, yet very cost effective methods of training like the learn-at-home videos and satellite training. A balance of methods is important in a system as massive as this one, where the ability to access training varies tremendously across providers and where resources are limited.

Regarding training needs, there is a high degree of consistency across provider groups in terms of areas they perceive as most critical. They identify supervision/discipline of children, social development (dealing with conflict), child development, and developmentally appropriate practice as areas with the highest priority. Although, providers do not identify any topic area as not a priority for training.

On the other hand, if we use the environment rating scales as an indicator where there are weaknesses in child care settings (hence, an area in need of training), we see a slightly different picture. Given the overall low score for the infant/toddler area (ITERS), any training in this area can be viewed as a priority. In addition, these items are consistently ranked low on all three environment rating scales: cultural awareness, personal grooming, dramatic (pretend) play, and sand and water play; furthermore, these areas are rated low in two out of the three environment rating scales: displays for children (FDCRS and ITERS), space alone (FDCRS and ECERS), helping infants/toddlers understand language (FDCRS and ITERS), art (ITERS and ECERS), and blocks (FDCRS and ITERS). Indeed, a number of these items from the environment rating scales fall under the broader categories of social development, child development, and developmentally appropriate practice. The information from the environment rating scales offers more specific areas of need.

One particularly interesting finding is the contradictory information related to the area of supervision/discipline of children. While providers identify this as a high priority area for training, the environment rating scales indicate an assessment in the good range for the discipline item. Again, this shows that
providers are performing better in this area than they think and it reveals the extent to which this is viewed as one of the most challenging areas in child care.

Turning now to the issue of quality of care and the factors that are associated with it, we find that our results that examine the relationship between the level of training at a site and quality of care are not as predicted. We do not find that the number of hours of training is a significant predictor of quality. What we do see, however, is that the most significant change in the quality of care since 1989 has occurred in family child care sites. Although we are unable to definitively conclude that the training system has been instrumental in improving quality of care in family homes, we do note that the home-based training system has been in existence for the longest period of time — over 10 years. Furthermore, the intervention effort (i.e. hours of training per year that staff at a site average), is still considerably low — 8.5 hours on average, with 98% of sample sites averaging fewer than 18 hours per year. A threshold for training to show some impact is around 18 hours according to other research (Howes, Smith & Galinsky, 1995). Given this, it is not unexpected that we do not find a significant relationship between number of hours of training and quality of care — there simply is not enough intervention (i.e. training hours) to determine impact. What does this mean for public policy? While limitations of the research design and measurements do not allow for definitive conclusions, there are some tentative policy implications that can be drawn from this study (Kagan & Wechsler, 1998). One concerns the number of hours of training that are mandated in the state regulations for child care. It indicates the need to increase the number of hours of training for child care providers if a significant impact of training is to be detected.

This is further supported when we see the strong association between the organizational climate dimension of opportunities for professional growth and overall quality of care at the site level. Centers where staff report more opportunities for professional growth have a higher quality of care and this factor, alone, explains a considerable portion of the variation in quality (40%). This finding substantiates the importance of fostering professional growth opportunities for child care providers. But it also implies the importance of making sure that these opportunities are linked to a model of career development and progression — not just a few hours of training that providers haphazardly take because they have to or because they are offered at a time that fits their schedule.

Overall, these data have given us some solid evidence to guide the development of the training system in Pennsylvania. We have highlighted some very specific areas where there is a need for training and we have shown the clear association between opportunities for professional growth and the quality of care. Although there are some anomalies in the data and some unexpected findings, as a whole, these data are supportive of the efforts to implement a training system that fosters career development in the prediction that these efforts will improve the quality of care for children in Pennsylvania.

NOTES

1. This included a set aside of 6.25% of $731,915.000 in 1991 federal funds for program quality initiatives.
2. A decision was made not to extend the data collection process for one additional family site after we had difficulty in scheduling the final site visit.
3. There were 26 paired observations analyzed to determine inter-rater reliability. For the ECERS, the rank order correlation was 0.92; for the ITERS it was 0.97; for FDCRS, it could not be calculated since there was only one paired observation; however, a visual inspection of the FDCRS data shows a high degree of consistency across observers.
4. The instruments include specific descriptions of what was for in assigning a value of 1, 3, or 7 for each of the items assessed. A mid-point rating of 2.4 or 6 is given when all the lower and part of the higher description applies. The internal consistency scores (Cronbach’s Alpha) for each of the environment rating scales is 0.58 for ECERS, 0.63 for FDCRS, and 0.43 for the individual subscales of the FDCRS.
6. They were asked to indicate if there is a need for training, based on a scale of 1 to 4 where 1 = a very serious need and 4 = not a training priority.
7. For the purpose of this analysis on training needs, both the directors and teachers within a group home have been combined into one category, representing group child care providers. This decision was made because the child care setting is usually small and a distinction cannot always be made between a "director" and "teacher" within the group site.
8. For example, the ECERS doesn't assess health and safety areas and the discipline item is spread across a number of supervision items.
9. Each factor was assessed by providers as 1 = very important, 2 = somewhat important, or 3 = not important.
10. It is important to keep in mind that when providers indicate that they learned the material, this is based on their subjective assessment, and the extent to which they actually did learn the material is not objectively measured through this question.
11. Teachers in both group and center settings were asked, "In general, how interested are you in taking workshops or courses on teaching and/or caring for
children?” Directors were asked to indicate their perception of interest on the part of their staff.

12. Family providers were asked, “Based on your experience, what method(s) of training are most helpful for you?” Center directors were asked, “Based on your experience, what method(s) of training are most helpful for your staff?”

13. The analysis in this section only includes child care centers since we used Bloom’s instrument only in facilities that had more than three staff, as recommended. There were a total of 60 centers included in the data set, however, due to missing data from some centers, only 55 are included in the analysis presented herein.

14. These coefficients are negative since a lower value on each of the evaluative factors indicates a more positive assessment.

15. If there were two classrooms observed, the new overall quality measure was an average of the two scores (regardless of the type of classroom observed). If only one classroom was observed, then that score became of the site’s overall quality score.

16. There may also be measurement problems related to the quantity of training variable. Issues related to recall on the part of the provider and definitions of what constitutes training may vary – both of which can affect the reliability and validity of the reported hours of training.

ACKNOWLEDGEMENTS

Keystone University Research Corporation would like to thank the many individuals who contributed to the completion of this study. First, the Department of Public Welfare, Office of Children, Youth, and Families, Bureau of Child Day Care is commended for their commitment to child care and efforts to improve quality. Without their funding of this project, it could not have been completed. The support of Richard Fiene, Ph.D., the DPW Project Officer, has been particularly instrumental in moving this research forward and guaranteeing that the policy implications of the findings are not lost. In addition, others within DPW – Kathryn Holod, Director, Bureau of Child Day Care and Jo Ann R. Lawer, Esq., Deputy Secretary for Children, Youth, and Families – are thanked for their continued support of this effort.

Thanks are also extended to the family, group, and center child care facilities that participated in this study as sample sites. Without their willingness to participate in this study and to be open and honest with the fieldworkers, this study would not have been possible. Furthermore, Lisa Heinzelman, Carla Thompson-John, Patricia Robinson-Burns, Ronnie Braun, Debora Reiff, Robin Eckert, Judy Peterson, Barbara Marchese, Majida Mehana, Kristi Hannan, Winifred Feise, Marilyn Albert, Jeanette Twombly, and Genevieve Mann are thanked for their quality efforts as fieldworkers for this study.

Finally, the individuals who contributed countless hours to assist the principal investigators in implementing this project – Pauline Kraus and Scott Johnson of Keystone University Research Corporation – are thanked for their perseverance over the long haul. The tasks of organizing the data collection process, monitoring the work of fieldworkers, organizing the data sets, and assisting in its analysis were complicated and required considerable attention to detail.

The overarching goal of this study is to contribute to our knowledge about how to improve the quality of care for children in Pennsylvania. We hope that the knowledge gained as a result of this study will take us one step further in that direction.

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Home-Based and Family Child Care: Characteristics and Quality Issues

Richard Fiene and Martha Woodward Isler

The importance of regulating home-based and family child care and improving the quality of these services is clear. The National Child Care Survey (Hofferth, Brayfield, Deitch, & Holcomb, 1991) suggests that the majority of children under five years of age whose mothers work full time are cared for in the homes of a neighbor, friend, family child care provider, or relative. Thirty-eight percent of children are cared for in home-based care verses thirty-five percent in center-based care.

CATEGORIES OF HOME-BASED FACILITIES

There are three basic categories of home-based providers who care for young children: regulated, legally unregulated, and illegally operating.

Regulated Providers

Regulated providers follow state laws, which determine a threshold of children allowed to be served at any one time and the standards child care providers must meet. These providers are licensed, registered, or certified, depending on the state, and include family child care home providers (one adult cares for six or (two adults care for

Legally Unregulated

These providers required for licensin exempt from regula standards that cari neighbor can take ii lated by a state. The

Illegally Operatin

Illegally operat though they serve t includes providers lized, registered,.

Most home-ba (Hayes, Palmer, & Z. 81% of the nonregi number of children 1995).

CURRENT QUALI

Little is known abo report that families the mothers’ jobs, a ity child care (Goel been under-researc have sought to cha lated providers a Approaches to stud tics (ratios and gr examine factors su ences (Kontos et al. Studies have a child care (Fiene et 1990). In each, th Day Care Environn
adult cares for six or fewer children) and group child care home providers (two adults care for 7–13 children).

**Legally Unregulated**

These providers serve a number of children less than the threshold required for licensing or registration, or they are relatives of the child and exempt from regulation. Family child care homes usually have additional standards that caring for children in one’s home does not. A relative or neighbor can take in one, two, or possibly three children and not be regulated by a state. These providers are considered legally unregulated.

**Illegally Operating**

Illegally operating providers are not licensed or registered even though they serve the threshold number of children. This category also includes providers serving more children than allowed, even if they are licensed, registered, or certified.

Most home-based caregivers are unregistered and unregulated (Hayes, Palmer, & Zaslow, 1990; Kahn & Kamerman, 1995). In one study, 81% of the nonregulated providers were illegally caring for more than the number of children their state allowed (Kontos, Howes, Shinn, & Galinsky, 1995).

**CURRENT QUALITY OF HOME-BASED FACILITIES**

Little is known about the quality of these arrangements. Some studies report that families who are the least well educated, have less income from the mothers’ jobs, and have higher levels of stress tend to have lower quality child care (Goelman & Pence, 1987a, 1987b). Family child care has been under-researched (Kontos et al., 1995). A number of recent studies have sought to characterize family child care quality, focusing on regulated providers and using observations as primary data sources. Approaches to studying quality include examining regulated characteristics (ratios and group size) and more process-oriented approaches that examine factors such as provider behavior and type of children’s experiences (Kontos et al., 1995).

Studies have also compared home-based child care to center-based child care (Fiene et al., 2002; Fiene & Melnick, 1991; Melnick & Fiene, 1990). In each, the overall quality of homes as measured by the Family Day Care Environmental Rating Scale (FDCRS; Harms & Clifford, 1990)
scored at or lower than center-based care when compared to the Early Childhood Environment Rating Scale (ECERS), which are similar scales for two different early childhood environments (Harms & Clifford, 1980). For more information on these rating scales, see Appendix 1 at the end of this chapter. In a recent study (Fiene et al., 2002), centers and homes scored about the same (see Figures 6.1 and 6.2), but lower than Head Start and nursery school programs.

Family Child Care (FCC) is generally perceived as “informal,” implying a less structured environment lacking in curriculum, a less educated provider, and a lower quality program. However, quality varies widely among family child care homes. Melnick and Fiene (1990), Fiene and Melnick (1991), and Fiene and colleagues (2002) found that the variation in the FDCRS scores of homes was much greater than it was in the ECERS scores of center-based facilities. Home-based facilities offered some of the best child care, but also some of the worst.

The primary incentives that lead family child care homes to become licensed include public subsidies, the possibility for referrals from resource
OBSTACLES TO IMPROVING THE QUALITY OF FAMILY CHILD CARE

It is far more difficult to study quality in family day care (home-based facilities) than in centers. The definition of quality varies across communities and among researchers, parents, and providers. Many providers do not want to be evaluated and are not accessible to researchers (Fiene et al., 2002). These and other factors suggest the few studies available may depict family child care as better than it is. This is a concern considering that legally exempt care homes serve the most children, but offer the lowest quality (Fiene et al., 2002).

Fiene and colleagues (2002) found the quality of regulated homes to be roughly comparable to that of child care centers, but not to the quality of Head Start or nursery schools. Poor quality was common in nonregulated homes (see Figure 6.3 on the next page). Children in informal settings are much less likely to engage in activities promoting literacy and learning than children in centers and regulated FCC homes (Zinsser, 1991).

The following section discusses research that may help to improve the overall quality of care in home-based child care.

CHARACTERISTICS OF IMPROVED HOME-BASED AND FAMILY CHILD CARE PROGRAMS

Several characteristics of homes have been found to be related to quality. They include the intentionality of the caregiver to view the care as a professional business and the caregiver having more education, utilizing a curriculum, and taking advantage of training and mentoring programs. Some characteristics are regulated, such as educational level, utilizing a curriculum, and the amount of training or mentoring. Others are not amenable to regulation, such as viewing a program as a business, but can be encouraged through training and mentoring.
Intentionality

Intentionality is an important factor in determining quality (Brandon, Maher, Joesch, & Doyle, 2002) and is defined as being committed to caring for children, seeking out child development learning opportunities and other professionals, and creating environments where children can be nurtured and learn. Intentional providers offer the high quality, warm, and more attentive care associated with better growth and development. These providers are found more frequently in family child care than in relative care.

Fienne and colleagues (2002) found a significant relationship between the education of the home-based provider and the overall quality of the home as measured by the FDCRS. Family child care homes, which cared for 4–6 children, and group child care homes, which cared for 7–11 children, were observed. The more education that the primary caregiver had, the greater the quality scores were. Having a college degree made a distinct difference in quality. These caregivers viewed themselves as professionals, had more administrative safeguards in place for parents, and more programmatic items in place, such as a curriculum for the children. The majority of those without a college degree saw themselves in the child care business short term, while their children were of preschool age.
Curriculum

Another way to improve the quality of home-based child care is to have family child care home providers utilize a curriculum (see Figure 6.4). Substantially higher quality scores were earned by family child care homes that utilized a curriculum, but a curriculum earned only slightly higher scores among group child care homes. In this study, the variation in educational levels was not as great in group child care homes as in family child care homes because the group child care homes were licensed and the educational requirements were more stringent than in family child care homes, which operated under a registration system.

Training and Mentoring Programs

A few experimental studies have examined ways to improve family child care. A quasi-experimental study (Galinsky, Howes, & Kontos, 1995) of a short-term training program, “Family to Family,” indicated that the training increased global quality but not process quality (e.g., interactions between caregiver and children). The Quality Early Learning Evaluation (Bagnato & SPECS Program Evaluating Team, 2002) identified key elements that enable low-income children to enter school prepared, learn early, and begin to succeed.

Figure 6.4 Curriculum Use in Type of Home Setting and FDCRS Scores

![Graph showing FDCRS Mean Scores for Family Homes and Group Homes with 'Yes' and 'No' categories]
High quality standards, ongoing mentoring (quality assurance), and the expectation that quality standards will be maintained were essential to achieving and sustaining high quality. The study also reported that mentoring ensures program quality, community leadership breeds program success, and parents learn to help their children succeed.

The findings are consistent with an Infant Caregiver Mentoring Study (Flene, 2002), which found that mentoring of infant caregivers produced positive behavioral change. Caregivers who received the mentoring intervention (see Box 6.1) were more sensitive and responsive to infant cues. The study is one of the few randomized control trials of a mentoring intervention. In the fall, 20 caregivers received mentoring, and 20 were assigned to a control group, which received the usual workshop training offered by the state. In the spring, the control group received mentoring, and the intervention group became the control. In each semester, those who received mentoring scored significantly higher on all quality measures, and the gains lasted at least through the following summer.

The National Association for Education of Young Children (NAEYC, 1987) has identified common program features related to quality:

- weekly mentoring to improve quality based on NAEYC and the National Association for Family Child Care (NAFCC) standards and practices;
- parent participation;
- ongoing child assessment and feedback to guide instruction and care; and
- community leadership and interagency partnerships, especially with schools.

Box 6.1  Capital Area Early Childhood Training Institute’s Caregiver Mentoring Program

This program offers intensive onsite technical assistance and mentoring to directors and caregivers. The program has been effective in making caregivers more sensitive and responsive to children’s cues. It is supported by Commonwealth of Pennsylvania and foundation funds, and the unit cost is about $40.00/hour. Mentors visit weekly with protégés in their individual programs. The ratio of protégés to mentor is 10:1. Protégés receive 70–80 hours of mentoring and technical assistance during an academic year.
NAFCC has set quality standards for accreditation in six domains: relationships, environment, activities, developmental learning goals, safety and health, and professional and business practices.

In one study of health and safety, regulated family child care providers had higher levels of compliance than unregulated family child care and relative providers (Galinsky, Howes, Kontos, & Shinn, 1994). It also reported that home caregivers provided higher quality care when they cared for relatively more children—three to six children—instead of one to two children. This result is related to intentionality. The caregivers saw themselves as professionals, planned more effectively, and utilized a curriculum.

RELATIVE AND NEIGHBOR CARE

In the United States, many employed parents depend on relatives to care for their children during work hours. The National Survey of America's Families (NSAF) found that, in 2002, 33% of children under age three and nearly a third of preschool children were cared for by a relative while their parents worked. Over 25% of children under age three were in relative care only as opposed to a combination of care arrangements (Snyder, Dore, & Adelman, 2005). However, there is little research on care provided by relatives and friends. One study (Kontos et al., 1995) found a pattern of behavior among relative providers that suggested less interaction with the relative's children than with unrelated children. Relative care was characterized as less structured, less formal, and less focused on the children. In another study (Brandon, Maher, Jesch, & Doyle, 2002), a majority of relatives and friends who provided child care reported at least some problems in providing care, and two-thirds said they would welcome training or support. However, no wide-scale training programs are available for this group of providers.

CONCLUSIONS AND RECOMMENDATIONS

Family child care or relative care is widely used by families with young children. Unfortunately, the quality of care in family child care and relative care is generally lower than the quality of center-based care. However, several recommendations to improve the quality of home-based care can be drawn from research. They include the following:

- **Attending an orientation session before the registration application is approved should be required.** Such a session should, at a minimum,
explain that family child care is a business, review regulations and the “how to” of operating a business, explain administrative requirements, and define financial arrangements.

- Require "registration" for all home-based care receiving public subsidies. Research shows that unregulated care is much lower in quality than regulated care.
- High quality preservice training initiatives specific to family child care should be funded.
- Mentoring models that involve intensive in-home training for caregivers should be implemented.
- A public education campaign should be implemented to inform parents and communities about what registration means and that “intentional” caregivers generally provide higher quality care than those who “watch” children.
- All home-based family child care providers should be brought into the regulatory system, which must provide technical assistance that helps providers improve the quality of care they offer.

APPENDIX 1: OVERVIEWS AND DESCRIPTIONS OF THE EARLY CHILDHOOD ENVIRONMENT RATING SCALE (ECERS) AND THE FAMILY DAY CARE RATING SCALE (FDCRS)

This section provides examples of what constitutes high and low quality by outlining key indicators of several ECERS-R and FDCRS items. These scales have been used in several major child care and early childhood studies over the past 20 years (Cryer, 1999; Galinsky et al., 1994; Helburn & Howes, 1996; Iucovitch, Fiene, Johnson, Koppel, & Langan, 1997; Jaeger & Funk, 2001) and are among the most reliable program quality instruments available.

Overviews

ECERS-R is designed to assess center-based programs for children in preschool through kindergarten (ages two and a half through five). The scale consists of 43 items organized into 7 scales: Space and furnishings, personal care routines, language reasoning, activities, interactions, program structure, parents and staff.

The FDCRS is designed to assess family child care programs. The scale consists of 40 items, including 8 supplementary items for programs serving children with disabilities. The descriptors cover the needs of a range of ages from infancy through kindergarten. The items are organized into
7 subscales: Space and furnishings for care and learning, basic care, language and reasoning, learning activities, social development, adult needs, provisions for exceptional children.

Each is described in four levels of quality: inadequate, minimal, good, and excellent. Inadequate and minimal ratings focus on the provision of basic materials and on health and safety precautions. The good and excellent ratings require positive interaction, planning, and personalized care, as well as good materials.

**ECERS-R Description**

A minimal score (3.00–3.99 on the ECERS-R), for example, on the language-reasoning subscale under books and pictures translates into a setting that has some books for children and at least one staff-initiated receptive language activity time (e.g., reading books to children or storytelling). A good or excellent score (above a 5.00 on the ECERS-R) requires more: (e.g., a wide selection of books are accessible for a substantial portion of the day, books are organized in a reading center, staff read books to children informally [e.g., during free play or at naptime], some books relate to current classroom activities or themes [e.g., books borrowed from the library on a seasonal theme], and books and language materials are rotated to maintain interest).

A minimal score on the furnishings for relaxation item indicates some soft furnishings and toys are accessible. However, other indicators would not be observed, such as a cozy area for children for a large part of the day and keeping most soft furnishings clean and in good repair. A minimal score on child-related display means some children's work is displayed, and there are appropriate materials for the predominant age group. But other indicators would not be observed, such as having displays that relate closely to current activities and children in the group or allowing children to do most of the work on the display.

A minimal score on activity items (e.g., fine motor, art, music/movement, dramatic play, nature/science, math/number) means that some developmentally appropriate materials were accessible and in good repair, but the caregiver fell short in other areas, such as not having the materials well organized or available at different levels of difficulty for the children or not providing opportunities to use materials for individual or creative expression.

**FDCRS Description**

A minimal score (3.99 or less on the FDCRS) for the child-related display category means that no child related pictures, mobiles,
children's artwork are put up for children to look at. A minimal score on the active physical play item means that, in some homes, there is little or no safe outdoor or indoor space for physical play. A minimal score on the activity items—art or sand and water play, for example—means that some materials were accessible, but the materials were not organized to encourage self help, the caregiver did not help children develop skills, and the materials were not well organized for independent use.

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Chapter 4

Child Care Quality, Compliance With Regulations, and Children’s Development: The Pennsylvania Study

Susan Kontos and Richard Fiene

The only public policy designed to maintain quality control in child care consists of each state’s licensing regulations. It is assumed that when child care programs comply with licensing regulations, they meet a level of quality that will, at the very least, not be harmful to the development of young children (e.g., Fiene & Nixon, 1981).

Many early childhood educators take issue with crediting the typical state child care regulatory system with anything closely related to quality. However, Morgan (1985) suggests that “Licensing establishes a basic floor of quality. A ceiling is represented by the goals of the profession” (p. 15). It is precisely this discrepancy between the floor and ceiling of quality that feeds the concern of skeptics who believe child care may be harmful for children and sparks the interest of researchers concerned about the impact of public policy on children and families.

Variation in regulatable characteristics of child care is related to differences in children’s intellectual, language, and social development or experiences. Little research has been done to determine how regulatable aspects of child care (those aspects of quality that enter into licensing criteria) relate to measures of quality determined by standards of the child care profession. Although a portion of the Bermuda Study addressed this issue (McCartney, 1984; Phillips, Scarr, & McCartney, this volume), data also are needed from American settings if specific public policy implications are to be drawn. Specific information is needed regarding how much children’s development is influenced by differences in regulatable characteristics of child care after all other relevant variables (e.g., age, SES, child care history) have been taken into account. Information of this nature will help determine which regulatable characteristics of centers are most critical to quality as it is defined by professional criteria and observed in child development outcomes.
A unique opportunity to obtain these data arose in the state of Pennsylvania, where the Office of Children, Youth and Families (OCYF) was wrestling with several related licensing issues. The first issue was one with which every state would like to deal: Pennsylvania had recently implemented an instrument-based program monitoring system to determine the level of center compliance to licensing regulations. The average center in the state was in compliance with 97% of the regulations (Fien, 1980). Most centers, therefore, met the basic floor of quality.

Second, child care centers in Pennsylvania are required to apply to and be accepted by the state as licensed vendors of subsidized child care slots. Consistent with its goal of promoting child development, OCYF wanted to know that vendors selected to provide subsidized care are providing high quality care as defined by standards in the profession and by positive child development outcomes. Because most programs complied with the licensing regulations, however, the state had no way to objectively discriminate among the quality of services provided by centers. Thus, OCYF sought data to help pinpoint key quality indicators from individual regulatable center characteristics by determining how well these characteristics predict child development outcomes, licensing compliance scores, and an environmental quality score as defined by early childhood professionals. OCYF planned to translate the knowledge obtained from these data into public policy concerning child care regulation and funding. The study described here was conducted in collaboration with OCYF.

Conducting the study

Centers

The 10 centers that participated in the study were randomly selected from a sample of 25 centers that volunteered. Those 25 were part of a sample of 40 centers selected as representative of the 350 centers in the northeast region of Pennsylvania (i.e., half urban, half with enrollment more than 30, half nonprofit). The random sample of 10 participating centers was stratified to approximate the proportion of urban/rural and profit/nonprofit centers in that region of the state. Thus, of the 10 centers, five were urban/nonprofit, three were urban/profit, and one each was rural/nonprofit and rural/profit.

Children and parents

Child care directors provided a list of all 3, 4, and 5-year-old children who had attended the center full-time (more than 20 hours per week) for at least 6 months. Of these, 100 randomly selected children participated. These 100 children were divided by gender (53 males and 47 females), were predominantly White, and were from all socioeconomic levels. Children's mean age was 53 months. Their average age of entry into out of home care was 24.98 months, and the average time spent in child care was 4,084 hours. Mean annual family income was $25,612 with a range of no income to $100,000.

Table 4.1. Means, Standard Deviations, and Ranges for Each Variable

<table>
<thead>
<tr>
<th>Variable</th>
<th>X</th>
<th>SD</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age of child (months)</td>
<td>52.80</td>
<td>8.66</td>
<td>36 - 70</td>
</tr>
<tr>
<td>Family background</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Mother's education (years)</td>
<td>13.07</td>
<td>2.74</td>
<td>4 - 21</td>
</tr>
<tr>
<td>Value for prosocial (score)</td>
<td>10.28</td>
<td>2.24</td>
<td>5 - 14</td>
</tr>
<tr>
<td>Child care experience</td>
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<tr>
<td>Age at child care entry (months)</td>
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</tr>
<tr>
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<td>2097.14</td>
<td>270 - 9300</td>
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<td></td>
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<tr>
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<td>21.59</td>
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</tr>
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<td>CDPE-IC (%)</td>
<td>88.94</td>
<td>7.03</td>
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<td>39.48</td>
<td>−51 - 100</td>
</tr>
<tr>
<td>COFAS</td>
<td>67.97</td>
<td>10.54</td>
<td>54 - 87</td>
</tr>
<tr>
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<td></td>
<td></td>
<td></td>
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<tr>
<td>Ratio</td>
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<td>2.06</td>
<td>6 - 15</td>
</tr>
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<td>2 - 14</td>
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<td>CBI-Soc</td>
<td>31.89</td>
<td>14.48</td>
<td>2 - 67</td>
</tr>
</tbody>
</table>
Family background is the most salient determinant of development in children attending child care centers whose quality varies from adequate to good.

Measures of center quality

Four measures of center quality were administered for each center. Three of these measures were scales developed by the Pennsylvania Office of Children, Youth, and Families in order to determine whether a center qualifies for fully or provisionally licensed status — the Child Development Program Evaluation Scale (CDPE) (Fiene, Douglas, & Kroh, 1978), the CDPE Indicator Checklist (CDPE-IC) (Fiene, 1984), and the Caregiver Observation Form and Scale (COFAS) (Fiene, 1984). These were the floor of quality measures. The fourth measure was a more comprehensive measure of overall environmental quality — the Early Childhood Environment Rating Scale (ECERS) (Harms & Clifford, 1980). This measure represents professional goals for quality. The CDPE and the CDPE-IC measure structural variables in child care. The COFAS and a significant portion of the ECERS measure process variables.

Compliance with licensing regulations in Pennsylvania is monitored through an instrument-based system. Each regulation has been translated into a dichotomous item with stated criteria that determine whether or not a center is in compliance with that regulation. Those items together form a 270-item instrument, known as the Child Development Program Evaluation (CDPE), that is administered annually by a regional licensing representative from the state during a lengthy site visit. The CDPE is comprised of the following seven subscales: program administration, environmental safety, child development program and curriculum, health, nutrition, parent involvement, and transportation.

Each item on the CDPE was empirically given a weight (translated into points) based on ratings of the level of risk to children’s health and safety if the center is out of compliance (see Fiene & Nixon, 1984, for method of determining weights). Centers begin with a perfect total score of 100, and points are then subtracted when a center is out of compliance on a particular item. For this study the CDPE total score on file for each center from the last site visit was one of three measures of quality related to compliance to licensing regulations.

The second measure of quality involving compliance to licensing regulations was the percent of items passed on the CDPE Indicator Checklist (CDPE-IC). The CDPE-IC is a 15-item scale comprised of the best predictors of the total score from the full scale (Fiene & Nixon, 1985). Items focus on staff ratios and qualifications, environmental safety, supervision, presence of health appraisals on children and staff, emergency contacts for children, food preparation, use of safety carriers during transportation, and social service agreement forms. An additional item
based on an observation of caregiver behavior comprised a separate scale (COFAS) in the present study and is described below. The CDPE-IC was administered at each center by a regional licensing representative and a child care center director (from a different center) shortly after the children's data were obtained. Both people administered both the CDPE-IC and the COFAS simultaneously but independently and reached a consensus on any items about which there was disagreement.

The observation of caregiver behavior (COFAS) is designed to determine if adult behavior in the child care setting promotes development of skills, self-esteem, and positive self-identity and provides for a choice of activities. The COFAS (Fiene, 1984) is a list of 29 caregiver behaviors that are coded during a 20-minute classroom observation, assigned their designated weight, and summed for a total score. A score of 30 or above is required for the caregiver to be in compliance with the observation item on the Indicator Checklist. Items comprising the COFAS were selected following extensive field testing (see Fiene & Nixon, 1983).

The Early Childhood Environment Rating Scale (ECERS) (Harms & Clifford, 1980) was administered at each center by one of the three-member research team. This scale consists of 37 items judged by early childhood professionals to be extremely important components of quality programs for children and has been shown to have high interrater reliability (McCartney, 1984; Harms & Clifford, 1980). The items focus on seven areas of quality (personal care routines, furnishings and display; language and reasoning experiences, creative activities, fine and gross motor activities, social development, adult needs).

Center characteristics

Seven center characteristics— one process variable and six structural variables—were individually measured: staff turnover, center capacity, staff-child ratio, group size, director's experience, average staff experience, and proportion of staff with 4-year degrees. Of these variables, only turnover was not regulatable. Staff turnover rate, the process variable, was measured by determining the proportion of staff positions that had been replaced in the previous year (or 2 years if the proportion was more representative). Only one staff member with a 4-year degree held it in a non-child-related major—psychology; the remainder of the degrees were in elementary education, early childhood education, or special education.

Children's development

Two measures of each of intellectual, language, and social development were obtained for each child. Intellectual development was measured by the Slossen Intelligence Test (Slossen, 1983) and the intellectual functioning subtest of the Classroom Behavior Inventory — Preschool Form (Schaefer & Edgerton, 1978). The Slossen Intelligence Test is an individually administered test of mental ability adapted from the Stanford-Binet (Form L-M). The Classroom Behavior Inventory — Preschool Form is a 60-item rating scale of which 30 items comprise the intellectual functioning subtest. This includes five subscales with items concerning task orientation versus distractibility, creativity/curiosity versus apathy, and verbal intelligence. See Schaefer and Edgerton (1978) for details.

Language development was measured by the Test of Early Language Development (TELD) (Hresko, Reid, & Hammill, 1983) and the Adaptive Language Inventory (Peagans & Parran, 1979). The TELD, an individually administered standardized test of language development, is designed to measure two dimensions of language—form and content—in both the receptive and expressive mode. For this study, the dependent measure was the language quotient. The Adaptive Language Inventory is a 18-item teacher rating scale of children's verbal ability in a classroom setting (see D. Parran, personal communication, 1984). Items focus on comprehension, production, rephrasing, spontaneity, listening, and fluency. All Adaptive Language Inventory item scores were summed for a total score.

Social development was measured by the Preschool Behavior Questionnaire (a 30-item behavior problem checklist that assesses social deviance) (Behar & Stringfield, 1974) and the sociability subtest of the Classroom Behavior Inventory. The Preschool Behavior Questionnaire is a modification of Rutter's Children's Behavior Questionnaire (Rutter, 1967), the items describe behaviors ranging from "squirmy and fidgety" to "unusual sexual behaviors." The questionnaire was designed to help identify children with symptoms of emotional disturbance. The second measure of social development was the 30 items relating to sociability remaining on the Classroom Behavior Inventory — Preschool Form (Schaefer & Edgerton, 1978). These items form six subscales related to extroversion/introversion, considerateness/hostility, and independence/dependence.

Four of the measures of children's development are identical to some used in the Bermuda Study: the Preschool Behavior Questionnaire, the Adaptive Language Inventory, and the Classroom Behavior Inventory which are all teacher rating scales. The Slossen Intelligence Test and the TELD are standardized tests administered by the researchers.

Family background

A standardized telephone interview was used to obtain family background information from the mother (only one mother could not be located).
Floor of quality appears to be different from a professional standard of quality, and the floor of quality measures appear to be somewhat different from one another.

The interview focused on demographic characteristics of the family (age, occupation, marital status, income, family size, and education), access to a Title XX child care subsidy the child's supplemental care history, childrearing and education values for the child (from the Parent as Educator Interview, Schaefer & Edgerton, 1979), and variety of stimulation in the home (from the HOME Inventory, Caldwell & Bradley, 1978).

In order to determine mothers' childrearing and education values, interviewers asked them to rank three sets of five statements about varying priorities for childrearing and education (Schaefer & Edgerton, 1979). The ranks were summed to form three subscores that indicated relative value for conformity, prosocial behavior, and independent problem solving in children's behavior.

The "variety of stimulation" subtest of the HOME Inventory (Caldwell & Bradley, 1978) provided a measure of home environment stimulation. Nine items concerning children's excursions away from home, participation in grocery shopping, inclusion at mealtime, the types of toys, and the display of children's artwork were scored as pass or fail. The total items passed comprised the home environment stimulation score.

Procedure

A team of three researchers visited each center for one day to obtain the ECERS scores and administer the Slosson Intelligence Test and the TELD. Children's primary caregivers were given instructions for completing the rating scales. They were asked to complete the rating scales item by item for all children so that they were using comparable scoring criteria. Researchers interviewed directors at the center to obtain information concerning the center characteristics. They conducted telephone interviews with children's mothers after the center visit.

Results of the study

Quality variables

Table 4-1 presents means, standard deviations, and ranges for each variable included in the analyses. All centers were qualified for a license based on the CDPE-IC and the COFAS. According to scores on the full CDPE, only six centers qualified to be fully licensed, three could be provisionally licensed, and one would be denied a license.

The mean ECERS total score indicated that the average item score on this measure for all centers was slightly above adequate, but less than good. The average ECERS item score for the lowest scoring center was adequate. For the highest scoring center, the average ECERS item score was slightly below good.

These data suggest that the centers participating in the study represented a range of quality both in terms of licensing criteria and in terms of professional standards. Several centers received perfect quality scores on the licensing measures; none of the centers scored at either extreme of quality as measured by the ECERS.

The intercorrelations among the quality variables reveal an interesting pattern (see Table 4-2). Correlations were consistently low to moderate. Predictably, the highest correlation was between the full CDPE and the CDPE-IC. In fact, because those two scores ostensibly measure the same thing, an even higher relationship was expected.

The most important of the correlations among quality variables were those between the ECERS (the professional standard for quality) and the three licensing variables (the floor of quality). Interestingly the ECERS was most strongly related to the COFAS, the measure of caregiver behaviors. The relationship between the ECERS and the total CDPE was only slightly weaker. What is notable about these correlations is that their small to moderate strength suggests that these measures of quality overlap very little with one another. In other words, the floor of quality appears to be different from a professional standard of quality, and floor of quality measures appear to be somewhat different from one another. Another possibility is that the two aspects of quality do not have a linear relationship and thus a correlation coefficient may not be an accurate index of the relationship.

Relationships between quality measures and center characteristics

One purpose of our study was to determine how well individual characteristics of centers (most of them regulatable) predicted measures of quality and vice versa, as defined by licensing criteria and by professional standards. Of the seven individual center characteristics, four predicted caregiver behavior (COFAS), two the total CDPE, and three ECERS. For this sample, the individual center characteristics were most strongly related to caregiver behavior both in number and strength of correlations. Capacity, group size, and ratio were the structural characteristics most consistently related to any aspect of quality. Larger center capacity and more children per caregiver predicted lower quality as measured by the ECERS (for both variables) and the CDPE-IC (for capacity only).
Correlations between center characteristics and center quality measures (N = 10)

<table>
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<tr>
<th>Characteristics</th>
<th>Average staff experience</th>
<th>Director's experience</th>
<th>Ratio</th>
<th>Group size</th>
<th>Capacity</th>
<th>Turnover</th>
</tr>
</thead>
<tbody>
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<td>-34</td>
<td>-34</td>
<td>-47</td>
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<tr>
<td>Ratio</td>
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<td></td>
<td>-34</td>
<td>-34</td>
<td>-34</td>
<td>-34</td>
</tr>
<tr>
<td>Director's experience</td>
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<td>-34</td>
<td>-34</td>
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<td>-34</td>
</tr>
<tr>
<td>Average staff experience</td>
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<td></td>
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<td></td>
<td>-34</td>
<td>-34</td>
<td>-34</td>
<td>-34</td>
</tr>
<tr>
<td>Group size</td>
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<td></td>
<td>-34</td>
<td>-34</td>
<td>-34</td>
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<td>Capacity</td>
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<td></td>
<td>-34</td>
<td>-34</td>
<td>-34</td>
<td>-34</td>
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<tr>
<td>Turnover</td>
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<td></td>
<td>-34</td>
<td>-34</td>
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</tbody>
</table>

Note: Due to sample size, no significance levels are reported.

Capacity, group size, and ratio were the structural characteristics most consistently related to any aspect of quality. Interestingly, and contrary to findings in other studies, group size was positively related to quality. The strong negative relationship between staff turnover and COFAS and the strong relationship between director's experience and COFAS are noteworthy. These data suggest that structural and process components of staff characteristics are related to caregiver behavior.

Relationships with children's development

The contribution of variations in center quality and center characteristics to children's development was measured in two ways. Initially, we correlated the child development measures with the measures of center quality and of individual center characteristics using Pearson Product-Moment correlations. The results of these analyses can be seen in Table 4.3. In general, the correlations were small, but a number of them reached significance because of the sample size. Three of the correlations stood out because of their strength. Higher quality, as measured by the CDPE-IC, and smaller center capacity were related to lower social deviance scores on the Preschool Behavior Questionnaire. Less director experience in child care was related to higher TELD scores.

In general, center characteristics and quality measures most consistently predicted language development as measured by the TELD. These correlations were all negative, however, and difficult to explain. Most probably, the reason is related to a confounding of center quality with family background: The lower quality programs tended to be in profit centers where more middle-class children, who performed better on the developmental assessments, were enrolled.

 Needless to say these correlations were confounded with children's ages, family background, and child care experience. The subsequent set of analyses attempted to control for the effects of these variables in order to obtain a clearer picture of how children's development is affected by individual center characteristics and center quality.

Regression analyses

Design. We used a hierarchical multiple regression model to control for the influence of children's age, family background, and child care history prior to examining the extent to which children's cognitive, language, and social development was affected by variation in individual center characteristics and center quality. A four-step process was implemented to determine predictors of children's development and to examine the influence of center characteristics. At each step, we calculated the
Table 4.3. Correlations of Center Characteristics and Quality Measures with Child Development Outcome Measures

<table>
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<tr>
<th>Characteristics</th>
<th>Measures</th>
<th>Child Development Outcomes (n = 100)</th>
</tr>
</thead>
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<td>Quality</td>
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<td>Slosson</td>
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<td>4-year degree</td>
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<td>Average staff experience</td>
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<td>.08</td>
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<td>.06</td>
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<tr>
<td>Turnover</td>
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</table>

A diagram of the model is presented in Figure 4.1. For the first step, children's age was the only predictor of the developmental measures. Then, the three family background variables found to influence center selection were added simultaneously to form step 2. It was important to know whether centers with certain quality scores were selected by families of a similar amount of variance in children's cognitive, language, and social development.

**Figure 4.1.** Diagram of Multiple Regression Model

- **Step 1**
  - Child development outcomes = Child's age
  - INTELLECTUAL
    - Slosson
    - CBI-Int
  - LANGUAGE
    - TELD
    - ALI
  - SOCIAL
    - PBQ
    - CBI-Soc
- **Step 2**
  - Family background
    - Education of mother
    - Use of subsidy
    - Value for prosocial
- **Step 3**
  - Center experience
    - Age at entry
    - Time in care
- **Step 4 or Omit**
  - ECERS
- **Step 4 or Step 5**
  - Center characteristics
    - Turnover
    - Capacity
    - Group size
    - Ratio
    - Director's experience
    - Average staff experience
    - 4-year degree.

Clusters of characteristics.
Table 4-4. Results of Hierarchical Multiple Regression Analyses (Beta Weights and $R^2$)

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<th>Measure</th>
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<th>Age</th>
<th>Mother's education</th>
<th>Subsidy</th>
<th>Value for prosocial</th>
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<td>.02</td>
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<td></td>
<td>2</td>
<td>.29</td>
<td>1.03*</td>
<td>.86</td>
<td>.78</td>
<td>.10</td>
<td>.0005</td>
<td>.08</td>
<td>.06</td>
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<td></td>
<td>3</td>
<td>.21</td>
<td>1.07*</td>
<td>1.10</td>
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<td>.10</td>
<td>.0004</td>
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<td>4</td>
<td>.21</td>
<td>1.04*</td>
<td>1.77</td>
<td>.80</td>
<td>.10</td>
<td>.0004</td>
<td>.09</td>
<td>.002</td>
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</table>

*p < .05
ure of social development was affected by variation in family background. Child care history failed to account for a significant portion of the variance for any of the six child development variables. Of the control variables included in steps 1 through 3, family background proved to be an important factor.

Of crucial importance to the purpose of the study was the effect of center quality on children’s development after the effects of the control variables were removed. It is particularly significant, then, that when ECERS was entered as step 4, it accounted for none or next to none of the variance in children’s development on any of the measures. In this study, center quality as defined by professional standards did not predict children’s development when age, family background, and child care history were taken into account.

Of equal importance to the purpose of the study was the effect of center characteristics, alone and in combination, on children’s development. Table 4.5 reports the proportion of variance accounted for by each center characteristic entered alone at step 4, without ECERS, and alone at step 5, after ECERS, on children’s development. The proportions of variance in children’s development accounted for by individual center characteristics ranged from 0 to .07 and were similar at step 4 and step 5 due to the lack of effects for ECERS. Center capacity contributed 0.8 to 7% and staff turnover contributed 2.7 to 4.2% of the variance for social deviance. Group size contributed 3.6 to 3.8% of the variance for language development (TELD) and 2.3 to 3.0% of the variance for intellectual development (Slosson). Staff turnover contributed 2.9 to 3.5% of the variance for intellectual development (Slosson).

The remaining proportions of variance accounted for by center characteristics were smaller. In nearly every instance, the effects of center characteristics were greater than the effects of quality on children’s development. The fact remains that the effects of all the individual center characteristics on children’s development were statistically nonsignificant.

Table 4.6 reports the proportion of variance accounted for by clusters of center characteristics entered at step 4, without ECERS, and at step 5, after ECERS. These results revealed two statistically significant effects, both of them involving the sociability subtest of the Classroom Behavior Inventory—Preschool. Two statistically significant effects would be expected solely due to chance. Director experience and average staff experience together contributed 16.2 to 16.4% of the variance for sociability. Those two variables combined with group size contributed 18.8 to
**Table 4-6. Proportion of Variance Accounting for Child Development Outcomes by Clusters of Center Characteristics**

<table>
<thead>
<tr>
<th></th>
<th>Slaunon</th>
<th>CBI-Int</th>
<th>TELD</th>
<th>ALI</th>
<th>PBQ</th>
<th>CBI-Soc</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Step 4</td>
<td>Step 5</td>
<td>Step 4</td>
<td>Step 5</td>
<td>Step 4</td>
<td>Step 5</td>
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<tr>
<td>Turnover Capacity</td>
<td>.035</td>
<td>.027</td>
<td>.023</td>
<td>.028</td>
<td>.036</td>
<td>.034</td>
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<tr>
<td>Ratio Group size</td>
<td>.063</td>
<td>.064</td>
<td>.024</td>
<td>.025</td>
<td>.051</td>
<td>.049</td>
</tr>
<tr>
<td>Group size Director's experience</td>
<td>.031</td>
<td>.023</td>
<td>.01</td>
<td>.009</td>
<td>.054</td>
<td>.055</td>
</tr>
<tr>
<td>Group size Average staff experience</td>
<td>.043</td>
<td>.035</td>
<td>.082</td>
<td>.083</td>
<td>.038</td>
<td>.037</td>
</tr>
<tr>
<td>Group size 4-year degree</td>
<td>.051</td>
<td>.043</td>
<td>.01</td>
<td>.009</td>
<td>.056</td>
<td>.056</td>
</tr>
<tr>
<td>Director's experience Average staff experience</td>
<td>.047</td>
<td>.046</td>
<td>.109</td>
<td>.109</td>
<td>.039</td>
<td>.038</td>
</tr>
<tr>
<td>Average staff experience 4-year degree</td>
<td>.074</td>
<td>.069</td>
<td>.13</td>
<td>.129</td>
<td>.033</td>
<td>.031</td>
</tr>
<tr>
<td>Group size Director's experience Average staff experience</td>
<td>.066</td>
<td>.058</td>
<td>.111</td>
<td>.112</td>
<td>.068</td>
<td>.064</td>
</tr>
<tr>
<td>Group size Average staff experience 4-year degree</td>
<td>.085</td>
<td>.077</td>
<td>.136</td>
<td>.135</td>
<td>.057</td>
<td>.056</td>
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</table>

*p < .05

**Discussion**

The results suggest that family background is the most salient determinant of development in children attending day care centers whose quality varies from adequate to good. The strength of family background as a predictor is consistent with a major study of preschool experience and children's educational attainment while school quality added little or nothing to predictions of cognitive development or educational attainment. In that study family background explained 11.2% of the variance in children's educational attainment, while school quality added little or nothing to predictions of cognitive development or educational attainment. However, the variance accounted for by family background is not as strong as the variance accounted for by educational attainment. In general, clusters of characteristics contributed substantially more to the variance in children's development than did other clusters of characteristics. This suggests that, although the clusters are not independent, they are important in understanding the variance in children's development.
The lack of statistically significant effects for individual center characteristics on children's development is certainly not a

More recently, Clarke-Stewart (Clarke-Stewart, this volume; Clarke-Stewart & Gruber, 1984) found no significant correlations between forms and features of family day care homes and children's intellectual and social competence when variation due to family background variables was partialled out. To a lesser extent, this also occurred for center-based child care programs.

In the Bermuda Study, family background variables were as predictive of children's language development as child care quality (McCartney, 1984; Phillips, Scarr, & McCartney; this volume). Clearly the data regarding family background and child care quality gleaned from this study are partially consistent with other data.

Moreover, the range of quality represented must be taken into account as we draw conclusions. Center quality, as measured by the ECERS, was a significant predictor of development in the Bermuda Study, but not in this study. Why the difference? In examining the differences between the centers participating in the two studies, it is immediately clear that the Pennsylvania centers, while they varied in quality, were substantially different in the range of quality than the Bermuda centers. The lowest quality center in Pennsylvania had an average item score of adequate while in Bermuda the average item score for the low quality centers was much lower. The implication may be that when child care quality ranges from adequate to good the differential effects of quality are nonexistent. When the lower range of quality drops below adequate, the differential effects may become salient due to detrimental effects of low quality care on children's development.

This is not consistent with Vandell and Powers's (1983) data that showed medium quality centers were more like low quality than high quality centers. They were using floor of quality measures, however, not professional standards. Being at a moderate level with respect to the floor of quality may indeed have different implications for children's development than being moderate in quality using professional standards.

Looking at the individual center characteristics in isolation, we found that capacity group size, and ratio were most frequently related to quality regardless of how it was measured. Contrary to the results of the National Day Care Study (Ruopp, 1979), however, group size was positively related to quality. On the other hand, the negative relationship between caregiver-child ratio and quality is consistent with the National Day Care Study findings. Consistent with the findings of Howes and Rubenstein (1985) and Vandell and Powers (1983), staff characteristics (turnover, ratio, director's experience, and average staff experience) predicted caregiver behavior (as measured by the COFAS). Children's performances on the Slosson Intelligence Test and TELD were the child development outcome variables most frequently related to individual center characteristics, particularly group size and director's experience. Recall that earlier these negative correlations were explained by confounding between center quality, profit status, and children's performance on developmental measures.

The results clearly show that individual center characteristics were much more powerful as predictors of children's development when they were treated in clusters than alone. The clusters of characteristics explained more than 10% of the variance in several measures of development and in two instances explained between 15 to 20% of the variance. The latter two were statistically significant predictors.

The lack of statistically significant effects for individual center characteristics (alone or in clusters) on children's development is certainly not a sign that policymakers are free to deregulate child care without fear of harming children. These results are a function of the characteristics of a small sample of 10 centers. The typical range of regulated center characteristics in Pennsylvania or any other state is unknown. Another line of reasoning suggests that researchers have yet to determine at what point an effect can be said to have a substantive impact on development, even when it is statistically significant. A number of effects that approached significance suggest that this study warrants replication in order to draw firmer conclusions regarding how structural and process characteristics of child care centers affect children's development.

With the added perspective of previous research, one thing that these data tell us is how far we have to go in understanding how variations in child care environments affect children's development. Consistencies and inconsistencies between studies ought to remind us of the innumerable variables that may be acting as a smoke screen to, rather than shedding light on, the relationship between child care quality and children's development. For instance, state-to-state variations in licensing regulations and monitoring, demographic variables related to families and communities, when and in what country the study was conducted, size of the sample of centers, and type of child development outcome measures are factors that singly and together surely influence the results of research in this area. This study contributes to the knowledge base by showing how, within the confines of the measures used and the sample of families and centers, family background contributes more to variation in children's development than center quality or individual center characteristics.
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This study was funded by a Research Initiation Grant from the Pennsylvania State 
University when the first author was on the faculty there. Appreciation is expressed 
to Irene Molzahn, the Northeast Regional Licensing representatives, and 
the staff and families of the participating centers. Cathy Thompson and Marie 
Bellows deserve special thanks for their work as research assistants.
Using a Statistical-Indicator Methodology for Accreditation

During 1991-92 the National Child Care Association (NCCA), a 4,500-member organization representing the private-for-profit sector in child care in the United States, pilot tested an indicator checklist system as a part of the developing and implementing of the National Early Childhood Program Accreditation system (NECPA). In the development of any indicator checklist system (ICS), a comprehensive set of standards must be used as the backdrop for creating key indicators. The NECPA system used as its set of comprehensive standards the NAEYC accreditation criteria.

NCCA’s reason for developing the NECPA system was to streamline accreditation without losing the comprehensiveness of self-study. This was a formidable endeavor in attempting to be cost efficient without compromising effectiveness. NCCA tried an ICS methodology because of its successful use in the development of licensing and monitoring systems. However, the methodology had never been used with accreditation.

NAEYC’s accreditation system had a long history of development and revision. It is clearly recognized in the early childhood field as the standard for program quality. Some states have built child care funding standards based upon NAEYC accreditation. Because of its reliance on an instrument-based program monitoring system and its comprehensiveness, NAEYC accreditation fits nicely with the ICS methodology. These aspects of NAEYC’s system are two major criteria in the development and use of the key-indicator methodology, and this relationship between an indicator checklist and its respective comprehensive instrument is critical. NECPA is the indicator checklist, with NAEYC being the comprehensive tool. Indicator methodology is always based upon this relationship with the comprehensive tool, which means that the indicator checklist cannot be used solely as the review instrument. In other words, the indicator checklist (NECPA) can never replace the comprehensive instrument (NAEYC).

Key-indicator methodology, an ICS developed in the late 1970s, responded to the Federal Intergovernmental Day Care Requirements (FIDCR) need to create a cost-effective and efficient monitoring system that would measure compliance with regulations. The ICS is based upon a statistical methodology that has the ability to predict overall compliance with state or federal regulations, based upon a very short list of key regulatory indicators. These key regulatory indicators predict statistically the probability that a program will either be in compliance or out of compliance with state
regulations in the aggregate. If a program is in compliance with the key regulatory indicators, the chances are that the program is in compliance with all regulations. The reverse is also true, if a program is out of compliance with the key regulatory indicators, the chances are that the program is out of compliance with other regulations.

A pilot study conducted between summer 1991 and spring 1992 used the NAEYC self-study process with an abbreviated version of the NAEYC criteria, the new American Academy of Pediatrics/American Public Health Association (AAP/APHA) child care standards, and selected criteria from a national licensing database of key indicators maintained at the Pennsylvania State University at Harrisburg. Trained observers (graduate students in the university's early childhood program) administered the two tools at selected sites throughout Pennsylvania. Results from the observations were tabulated into overall percentage scores on the program as well as component scores by administration, curriculum, physical environment, health and safety, and staffing (Figures 1 and 2). The overall correlations were all statistically significant, showing a very strong relationship (r) between the two tools (r = .93, with component scores = .88 to .96).

These results should not be surprising because the key indicators are essentially a subset of the overall comprehensive instrument used by NAEYC, with only some modifications from the APHA/AAP standards and the National Key Indicator Data Base. This is an important point because there have been misunderstandings regarding the relationship between the two systems. On the surface the NECPA accreditation system appears as a watered-down version of the NAEYC accreditation system. This is not the case. It is true that the NECPA system has fewer criteria; however, the reason is that these criteria are the key indicators that statistically predict compliance with all NAEYC criteria. For the most part, the NECPA and NAEYC systems would accredit the same programs and defer accreditation on the same programs.

Could NAEYC use the key-indicator statistical methodology in its present system? I think the answer is a qualified yes. For programs seeking reaccreditation, with certain criteria not changing, such as no director turnover, little staff turnover, full license in place, no complaints, and so on, the answer would be in the affirmative. The key-indicator statistical methodology would have to be limited in this way. It should not be used in a reaccreditation where substantial changes have occurred. If changes have occurred, it alters and invalidates the key-indicator statistical methodology, which is always based upon a comprehensive review—the NAEYC self-study.

Remember that the real advantage to using a key-indicator methodology is in the time saved by a high-quality program in which there is high compliance with all criteria. Also, there is the time saved in the review process by validators and national accreditation commissions.

The key-indicator methodology could be used with a sample group of NAEYC-accredited programs from the national database that NAEYC maintains. The key-indicator statistical methodology could be run on this sample of programs. Key indicators would be developed from the results. This is a relatively straightforward exercise that could be done at the Pennsylvania State University at Harrisburg National Center for Early Childhood Program Evaluation. A sampling of key regulatory indicators from the National Key Indicator Data Base follows:

- staff-child ratios
- group size
- staff training
- director qualifications
- lead-teacher qualifications
- children properly immunized
- children supervised at all times
- developmentally appropriate discipline followed

The purpose in developing the NECPA system and in even suggesting the use of the key-indicator methodology within the existing NAEYC accreditation system is not to water down a comprehensive process but to make it more efficient and effective in reaccrediting programs of very high quality. The use of key indicators also helps to streamline a rather labor-intensive, validator and national commission process and review. Another component of the NECPA system is the automated/computer-generated profile of program compliance with standards. The NECPA system was not designed as a competing system but, rather, a system complementary to NAEYC's using the latest technologies in the monitoring of early childhood programs.

Although the NECPA system was not designed to compete with the NAEYC system, the issue of competition has surfaced, often generating impas-
Figure 1. Relationship of NAEYC and NECPA Accreditation Systems


Figure 2. Comparison of NAEYC and NECPA Accreditation System Components

sioned discussion. The accreditation of early childhood programs stands to benefit or suffer, depending on one's perspective. On the positive side, a certain amount of competition generally improves the systems involved; it is to be hoped that both the NECPA and NAEYC systems will improve as a result of their coexistence. However, the negative side is that having two systems is potentially confusing for parents. Although NECPA is a key-indicator approach of the NAEYC accreditation system, this is not clear for the average consumer of child care services. In fact, the key-indicator methodology lacks full acceptance within the early childhood research community. Researchers see the benefit of the key-indicator approach within a licensing system but still question its usefulness within an accreditation system.

With the pilot study and the subsequent research done on the NECPA system, the bottom line is the resulting validation of the NAEYC accreditation system. The NAEYC system remains the comprehensive standard in the field against which all other accreditation systems must be measured. The NECPA results only confirm this, with extremely high correlations between the short version of the NAEYC instrument and the comprehensive version of the NAEYC instrument. The NAEYC system establishes the baseline of program quality for early childhood programs. It is the starting point for programs in their comprehen-

sive self-evaluation. A self-study based upon the key-indicator methodology (NECPA is an example of this approach) can never replace a comprehensive review. The key-indicator self-study can supplement the comprehensive review in subsequent years if there have been few changes since the program conducted its last comprehensive review. It is always assumed that there was very high compliance with the NAEYC criteria in becoming accredited in the first comprehensive self-study.

Future developments in accreditation need to take into account the results of the NECPA pilot and the NAEYC accreditation system. Is the selected use of a key-indicator statistical methodology warranted within the NAEYC system? Only with additional research will we be able to determine the answer.

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Innovation in monitoring in early care and education

Options for states

An ASPE White Paper, in partnership with ACF

U.S. Department of Health and Human Services
Pamala Trivedi, Office of the Assistant Secretary for Planning and Evaluation (HHS/ASPE), in partnership with the Administration for Children and Families (ACF)
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Innovation in monitoring in early care and education: Options for states

An ASPE White Paper

April 2015

Pamala A. Trivedi

Office of the Assistant Secretary for Planning and Evaluation (ASPE), in partnership with the Administration for Children and Families (ACF)

U.S. Department of Health and Human Services


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Acknowledgments

Many people worked hard in supporting the completion of this white paper. This paper contains a great deal of information about local practice in states, and I am greatly appreciative of the time and openness of state administrators across agencies who have been working on behalf of the health and safety of children for many years. This paper has also greatly benefitted from the advice and careful thinking of a number of colleagues at the U.S. Department of Health and Human Services. Linda Smith from the Administration of Children and Families, and her team members Katherine Beckman and Richard Gonzalez have helped shaped this paper from its inception. Adia Brown from the Office of Head Start also provided substantial support in developing the content of this paper. Several colleagues at ASPE provided thoughtful feedback at various stages of this work, including Jennifer Burnszyński, Laura Radel, Lindsey Hutchison, Sharon Wolfe, Kimberly Burgess, Nina Chien, and Kirby Chow. This paper also benefitted considerably from the conscientious reviews of Taryn Morrissey and Richard Fiene.
Executive Summary

Ensuring children are in safe environments that promote health and development is a top priority of families, state regulators, the federal government, and national organizations that accredit early care and education programs (ECE). This paper examines monitoring across ECE settings and considers lessons learned from the analogous sectors of child welfare and health. Although professional organizations in partnership with federal agencies developed national guidelines for health and safety, there is wide variation in state and local regulations around the minimum health and safety requirements for children in care. Areas of regulatory variation include: 1) thresholds for the number of children in licensed care at ECE facilities located in family child care homes (FCCs); 2) the comprehensiveness of background checks for ECE provider staff and individuals residing at FCCs; and 3) the frequency of monitoring visits.

ECE providers may receive funding from one or more public sources including, the Child Care and Development Fund (CCDF), Head Start/Early Head Start (HS/EHS), State Pre-Kindergarten (State Pre-K), Child and Adult Care Food Program (CACFP), Early Intervention and Special Education, and the Department of Defense Child Care. Providers funded by more than one public source are subject to multiple accountability systems that are not always aligned. ECE providers seeking national accreditation engage in yet another layer of accountability and quality improvement. Some states that are building or reforming Quality Rating and Improvement Systems (QRIS) are attempting to create unified early learning standards and consistent ECE program ratings across funding streams and provider types.

Many states use differential monitoring to improve the efficiency of monitoring systems and technical assistance (TA) systems. As opposed to “one size fits all” systems of monitoring, differential monitoring determines the frequency and comprehensiveness of provider monitoring based on the provider’s history of compliance with standards and regulations. Providers that maintain strong records of compliance are inspected less frequently, while those with a history of non-compliance may be subject to more announced and unannounced inspections. This paper includes case studies from states involved in various stages of implementing differential monitoring approaches.

Implementation of the Child Care and Development Block Grant Act of 2014 (CCDBG), which was signed into law in November 2014, will likely result in more uniformity in state practice in some of the components of monitoring. Using examples from states reforming their child care licensing systems, this paper outlines the challenges and possibilities of building accountability systems that support positive child and family outcomes while reducing the burden on individual providers within multiple funding streams. This paper provides a general overview of the current monitoring system, and highlights several examples of promising state practices that are already underway. It offers a vision for accountability that addresses compliance with a minimum floor of health and safety standards, and promising strategies for continuous quality improvement. The goal of this paper is to inform upcoming changes in licensing and monitoring systems that will take place in the context of the reauthorized CCDBG implementation.
Options for states that could improve monitoring practice:

1. Monitoring policies and procedures could be aligned across funding streams, and grounded in a universal set of health, safety, and performance standards that are research-based and endorsed by professional organizations.

2. After further validation by the research community, differential monitoring could be piloted and implemented to help states target technical assistance and monitoring resources to the ECE providers most at-risk for providing unsafe learning environments.

3. Third party accreditation and credentialing by national organizations could be expanded. This strategy is widely used in analogous sectors.

4. For ECE programs that are also federal grantees subject to monitoring, federal and state agencies could share any negative findings, or instances of non-compliance.

5. Federal and state agencies could partner to increase understanding among the community of providers that the larger purpose of monitoring is to keep children, families, and staff safe.

Background, Issues and Challenges

Ensuring children are in safe environments that promote health and development is a top priority of families, state regulators, the federal government, and national organizations that accredit early care and education programs (ECE). This paper examines monitoring across ECE settings and considers lessons learned from the analogous sectors of child welfare and health. Although professional organizations in partnership with federal agencies developed national guidelines for health and safety, there is wide variation in state and local regulations around the minimum health and safety requirements for children in care. Areas of regulatory variation include: 1) thresholds for the number of children in licensed care at ECE facilities located in family child care homes (FCCs); 2) the comprehensiveness of background checks for ECE provider staff and individuals residing at FCCs; and 3) the frequency of monitoring visits.

This white paper outlines the goals and purposes of monitoring in ECE settings and provides policy options for accomplishing these goals. It describes the current state of monitoring in ECE and in two analogous fields. In doing so, it provides examples of best practices and advances that have been achieved in monitoring across ECE settings, and it provides research-based policy options that federal, state, and local governments can employ to encourage states to imbue monitoring systems with innovative, evidence-based practices; foster greater consistency across states; and move away from a culture of compliance and accountability toward a culture of continuous quality improvement.

This paper addresses several questions about monitoring in ECE settings, including:

- What is the current purpose of monitoring in ECE?
- What federal regulations for ECE monitoring currently exist?
- What is the evidence base for effective monitoring strategies in ECE or analogous sectors?
• What ongoing monitoring work in states is linked to quality improvement?
• Are technical assistance resources directed to the ECE programs that are identified as having compliance issues through monitoring? If so, how?
• How can we reduce the overlap between federal or state monitoring and other systems of quality assurance in ECE, such as accreditation, licensing, inspection, and Quality Rating and Improvement Systems (QRIS)?

In addressing these questions, the Office of the Assistant Secretary for Planning and Evaluation (ASPE), in conjunction with the Administration for Children and Families (ACF), conducted a literature review and interviews with federal and state officials, researchers, and advocates. ASPE’s work on this paper builds on a foundation of background research and discussions with expert researchers, practitioners, and stakeholders initiated by ACF in 2012.

The Current State of Monitoring in Early Care and Education (ECE)

<table>
<thead>
<tr>
<th>Table 1: Types of Child Care and Early Care and Education (ECE) Settings¹</th>
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<tbody>
<tr>
<td><strong>Child care center</strong></td>
</tr>
<tr>
<td><strong>Family child care home (FCC)</strong></td>
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<tr>
<td><strong>Group child care home</strong></td>
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<tr>
<td><strong>Relative care²</strong></td>
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<tr>
<td><strong>In-home care</strong></td>
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<tr>
<td><strong>Head Start/Early Head Start (HS/EHS)</strong></td>
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<tr>
<td><strong>Pre-Kindergarten (Pre-K)</strong></td>
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¹ Many of these definitions are according to the Child Care and Development Fund (CCDF) Final Rule (1998). Care is usually specified as fewer than 24 hours per day per child, unless care in excess of 24 hours is due to the nature of parent(s)’ work.
² Relative and in-home care are usually excluded from state regulations.
Licensing, accreditation, and monitoring systems have been independently designed and implemented. Licensing in ECE settings is under the provision of the state and subject to local statutes. In contrast, ECE providers may choose to seek accreditation by a private organization. The National Association for the Education of Young Children (NAEYC) and the National Association for Family Child Care Homes (NAFCC) are two of the major national professional organizations that provide accreditation. Accreditation typically involves a provider self-study followed by an onsite review by trained professionals associated with accrediting bodies.

Monitoring is performed in conjunction with state child care licensing and is typically accomplished through an on-site visit of ECE provider facilities. Its purpose is to determine whether the providers and setting meet applicable regulatory standards. Several challenges are associated with monitoring systems that currently exist in states, including:

- States may legally exempt certain types of ECE sites from licensing, such as those associated with established religious organizations or congregations. In some states, family child care homes that care for only one or two unrelated children are not regulated. It is important to note that the safety of children in license-exempt programs is unknown, even if these programs receive federal funds.
- Part-time child care settings operating for fewer than four consecutive hours are not regulated across states.
- Not all states regulate programs for children age 4 years and older that operate as part of private, accredited, independent elementary or K-12 schools.
- Some states accept provider self-reports to meet licensing requirements. Providers attest to whether or not they have met listed requirements for licensing through checklists.
- Some ECE sites also receive federal funds and are subject to federal monitoring procedures that may not directly correspond with state monitoring requirements, contributing to an administrative burden for ECE sites.

A lack of coordination across systems. Federal and state governments have implemented systems for monitoring in response to national and local statutes in different ECE sectors. These sectors range from the state-administered Child Care and...
Development Fund (CCDF), Head Start and Early Head Start (HS/EHS) grantees that receive federal funds, the expanding state-administered Pre-Kindergarten programs, state-administered Early Intervention and Special Education, the federally funded Child and Adult Care Food Program (CACFP), and the federally administered Department of Defense (DOD) child care programs on military installations. A common result of varying statutes is inefficiency and a high administrative burden for grantees and programs that are subject to different monitoring requirements due to support from multiple funding streams.

For example, a large number of private and public ECE providers—including many HS/EHS grantees—participate in CACFP, a federal program administered by the U.S. Department of Agriculture (USDA) that offers assistance to ECE centers and family child care homes in providing nutritious foods. Many children who participate in ECE with the assistance of federal subsidies attend programs that are part of the CACFP program. Additionally, the training and inspection requirements for CCDF across states and CACFP are very similar. Program and monitoring requirements are also similar across CACFP and CCDF, and USDA has issued guidance encouraging streamlining of these requirements. However, a lack of coordination among state agencies that administer these programs often results in duplicative inspections across these federal programs, and results of monitoring visits are not shared or used in concert in efficient ways.

Charlotte Brantley, who led the Child Care Bureau from 1999-2001 and is now director of an ECE program in Colorado underscored this frustration during a Senate Subcommittee hearing that informed the reauthorization of the Child Care and Development Block Grant (CCDBG):

> The program that I run, it's a licensed child care facility, so it's inspected by child care licensing, it's inspected by the food program, it's inspected actually by the local arm of the State health department, it's inspected by Head Start, and it's inspected separately by Early Head Start...and it's inspected by the HIPPY USA because we use the HIPPY curriculum, and it's inspected by Denver Public Schools because we are a Denver Public Schools Colorado preschool program provider, and now we're being also inspected by the Denver Preschool Program. So we are inspected by funding stream, if you will. We are an incredibly high-quality program. We have all the stars you can get. We'd have more stars if there were more stars in Colorado's QRIS. We have incredibly clean [monitoring reports] every 3 years Head Start and Early Head Start. There are never any findings in this program, and yet I am monitored by everybody and their brother.

As the quote demonstrates, grantees are often at a loss about why there are different requirements across funding streams. Even if there are similarities in inspection and

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4 Home Instruction for Parents of Preschool Youngsters

5 Quality Rating and Improvement Systems

enforcement from different federal and state regulatory agencies, concerns and non-compliances may be handled differently by each entity. Current monitoring practices often overlap in ways that are not efficient and are potentially burdensome to ECE programs subject to multiple and duplicative regulations.\(^7\)\(^8\) The inefficiencies and increased costs are passed along to taxpayers, monitors, and regulators.

**The need for more effective oversight.** Unfortunately, while there are cases of high-quality programs that are frequently monitored by parallel systems, there are also egregious instances of serious injury or deaths in ECE programs. In part, these instances can be attributed to a lack of effective oversight or resources needed to meet regulatory requirements. In 2011, the U.S. Department of Health and Human Services’ Office of the Inspector General (OIG)\(^9\) reviewed open-source information from the previous decade and found several cases across states of individuals convicted of serious sexual offense who gained access to child care facilities as maintenance workers, cooks, or spouses or friends of providers. OIG found that providers either knowingly hired these offenders or did not perform the necessary pre-employment background checks intended to detect such convictions.

To further identify health and safety risks at child care providers receiving federal funds, in 2014 OIG\(^10\) audited licensed child care centers and family child care homes across states. OIG found that although states were largely conducting inspections that their licensing rules mandated, the monitoring did not ensure that providers complied with state health and safety licensing requirements. Noted violations existed that were often related to physical conditions of the center or family home, and required criminal background and child protection checks. To ensure more adequate state oversight, OIG recommended that monitoring staff have smaller caseloads. States also provided feedback about undertaking analyses of inspection protocols in order to increase efficiency for existing monitoring staff. Recently, Crowley\(^11\) and her colleagues undertook an analysis of routine, unannounced reports of child care centers collected by the Connecticut Department of Public Health. The study found that outdoor safety was the largest area of non-compliance. Notably, there was a positive association between compliance with health and safety regulations and continuing professional development and education for staff, another Connecticut requirement. Inconsistency in reporting among inspection staff also threatened to undermine a standardized and fair licensing experience for

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Connecticut ECE providers. These findings across studies are indicative of the lack of a strong regulatory and enforcement infrastructure in some state child care systems. The findings also suggest those providers who comply with health and safety regulations are often those who are more committed to training and professional development or advancing quality in other ways.

Thanks to decades of research, a great deal is known about healthy brain development, the impact of toxic stress, and how ECE settings can be responsive to the needs of highly vulnerable children and families. However, not enough is known about the specific characteristics of a comprehensive, high-quality monitoring system that identifies whether programs adequately support healthy child development. To improve the way monitoring is performed, systems should focus both on applying a compliance framework in a fair, consistent, and non-duplicative way and focus on improving quality through program supports. With many young children receiving care in settings outside their homes, the ECE community is re-focusing attention on the dual purposes of work support for families and ensuring that children are in safe settings that promote health and development across domains.

Monitoring in Child Care Settings
Current regulations, variations in state practice, and upcoming reforms

The Administration for Children and Families (ACF) administers the Child Care and Development Fund (CCDF), providing child care subsidies for 1.5 million children every month. Based on data reported to ACF by States, in fiscal year 2012, an estimated that 89 percent of children who received CCDF subsidies were served in either family homes or centers. Prior to the passage of the Child Care and Development Block Grant Act of 2014 (CCDBG), there were no specific federal health and safety requirements defined in statute. Current federal regulations require states to certify that procedures are in place to ensure compliance with all applicable state and local health and safety requirements. Some states allow providers to self-certify, yet current CCDF regulations do not require monitoring. States are required to have health and safety regulations related to 1) preventing and controlling infectious disease; 2) building and physical premises safety; and 3) minimum health and safety training. However, states have considerable flexibility in how they meet these requirements. For example, because it had not been in federal statute or regulation, not all states have requirements for criminal background checks, training on first aid and CPR, or safe sleep.

Exemptions, unlicensed care, and serious injuries and fatalities in child care. Although state child care licensing regulations provide a baseline of protection for the health and safety of children, the types of providers who are required to meet licensing standards vary

14 Section 658E of The Child Care and Development Block Grant Act of 1990 (CCDBG)
tremendously. As mentioned previously, most states have exemptions for licensing, including facilities with parents on the premises; facilities operated by religious organizations; recreational programs or instructional classes; facilities with a small number of hours per day or week; and before- and after- school programs. Family child care providers are often excluded from licensing in some states and not regulated by other public agencies. Reports of child injury and death occur most frequently in homes and facilities that are not monitored by states.

In one of the few national studies of child mortality rates in early care and education, Dreby and colleagues documented variation in fatality rates by the strength of licensing requirements. This study also suggested that licensing serves as an important mechanism for identifying high-risk facilities that pose the greatest threats to child safety. It is important to note that there is a lack of comprehensive, national data on deaths and injuries in child care, and many states do not require reporting on deaths or serious injuries. In FY 2012, ACF began requiring states to include a Quality Performance Report (QPR) as an appendix to biannual State Plan submissions, and currently, states have the option to list and describe the annual number of injuries and fatalities in child care. However, not all states review the context and circumstances of injuries and fatalities in child care in ways that provide opportunities to improve regulations and enforcement. The discussion below delves further into variations in state practices of implementing health and safety standards. Following this discussion, prominent case studies are presented of states mobilizing efforts across public and private sectors to learn from tragedies in child care by putting in place safeguards to prevent children from being harmed. Recent state data and examples from the media underscore the need for more uniform requirements across states.

**State licensing thresholds.** Using data collected in 2011, the Office of Child Care’s National Center on Child Care Quality Improvement (NCCCQI) in conjunction with the National Association for Regulatory Administration (NARA) analyzed child care licensing and monitoring practices in states. All states regulate child care centers. However, state variation is even more pronounced among family child care homes, group child care homes, and certain types of religiously affiliated child care facilities. Forty-two states license family child care homes, and nine of these states (21 percent) require licensure when there is even one unrelated child in care (AL, CT, DE, DC, MA, MD, MI, OK and WA). Most other States set their licensing threshold to three children (19 percent) or four children (26 percent). Thirty-eight states license group child care homes, which are defined as two or more adults taking care of a group of children, with states (42 percent) most frequently setting the threshold at seven

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children. Thirteen states do not have a separate designation for group child care family homes, but several of these include group child care family homes under the category of family child care homes, with the associated thresholds.

**Monitoring frequency in states.** The NCCQI-NARA analysis also examined frequency of inspections (see Table 2). Although the frequency of inspections has improved since 2007, monitoring practices still range widely. Only 14 states (28 percent) inspect centers two or more times per year, the recommended frequency by *Caring for our Children* (see Table 2). Only nine of the states (21 percent) that license family child care homes, and 13 (34 percent) of those that license group child care homes visit these sites twice a year. States more commonly conduct only one annual monitoring visit, with 24 states (48 percent) visiting centers once a year. Fourteen of the states (33 percent) that license family child care homes require visits once per year, and 14 of the states (37 percent) that license group child care homes do so.

<table>
<thead>
<tr>
<th>Table 2: Frequency of Licensing Inspections in States in 2011*</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Child Care Centers (N=50 states)</strong></td>
</tr>
<tr>
<td>More than three times per year</td>
</tr>
<tr>
<td>Three times per year</td>
</tr>
<tr>
<td>Twice a year</td>
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<tr>
<td>Once a year</td>
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<tr>
<td>Once every two years</td>
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<tr>
<td>Once every three years</td>
</tr>
<tr>
<td>Less than once every three years</td>
</tr>
<tr>
<td>No inspection</td>
</tr>
<tr>
<td>Other frequency**</td>
</tr>
</tbody>
</table>

*Please see footnotes 10-12 for the National Center on Child Care Quality Improvement (NCCQI) Research Briefs that are the source of data for this table.

**Note 2** For the purposes of this study, DC was treated as a state. ID has child care licensing at the city/county level and was not included in this study.

**Note 3** Not all states license family child care homes or group child care homes.

**Note 4** Other frequencies could be based on compliance history or facility size.

**Comprehensive background checks.** In terms of setting a minimum floor of health and safety standards for children in out-of-home care, the issue of comprehensive background checks is closely related to monitoring. In 2011, ACF provided guidance to states about criminal background checks in the form of an information memorandum (IM), recommending that comprehensive criminal background checks for all child care providers be performed. ACF

recommended that all paid staff in ECE settings undergo comprehensive background checks, regardless of whether they are legally exempt from licensing as determined by a state. The recommended practices align with what is required in Head Start/Early Head Start settings. ACF cites the lack of a unified, national system for checking criminal history and child abuse records, and recommended that background checks include:

- Using fingerprints for state checks of criminal history records;
- Using fingerprints for checks of FBI criminal history records;
- Checking the child abuse and neglect registry; and
- Checking sex offender registries.

Although all states and territories require some type of background check for ECE providers, the types of providers and staff members who must undergo background checks vary, as does the kind of background check that is required, which combination of state and federal databases are used, and whether fingerprinting is involved. An organization focused on research, advocacy, and resources for families and practitioners, Child Care Aware of America described background checks that are not based on fingerprints as “of limited value,” presumably because a name search alone can be misleading. NCCQI-NARA found that in 2011, 12 states required comprehensive checks of federal and state criminal history checks for both center-based staff and family child care home staff; the process used fingerprinting and checks of child abuse and neglect registries. Many of the states that have implemented comprehensive background checks are also working on other aspects of health and safety. Table 3 below summarizes state practices on different aspects of criminal background checks.

<table>
<thead>
<tr>
<th></th>
<th>Child Care Centers (N=50 states)</th>
<th>Family Child Care Homes (N=42 states)</th>
<th>Group Child Care Homes (N=38 states)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Criminal history records</td>
<td>48</td>
<td>41</td>
<td>35</td>
</tr>
<tr>
<td>Federal fingerprints</td>
<td>32</td>
<td>20</td>
<td>26</td>
</tr>
<tr>
<td>State fingerprints</td>
<td>26</td>
<td>17</td>
<td>21</td>
</tr>
<tr>
<td>Child abuse and neglect registry</td>
<td>44</td>
<td>38</td>
<td>34</td>
</tr>
<tr>
<td>Sex offender registry</td>
<td>24</td>
<td>13</td>
<td>20</td>
</tr>
</tbody>
</table>

Note 1* Please see footnotes 10-12 for data sources and notes

Despite variation in state practices surrounding basic health and safety standards, national surveys demonstrate that parents are under the reasonable assumption that their child care providers have undergone all necessary background checks, completed health and safety trainings and are regularly monitored. The current system must strengthen health and safety

standards, assist parents in making informed choices about care, reduce the administrative burden on ECE providers, and support state efforts to improve the quality of early care and education settings families can access. The Child Care and Development Block Grant of 2014 (CCDBG) that was signed into law in November of 2014 goes a long way to advance the field in these specific areas.

New legislation and regulations. Following up on guidance issued in 2011, ACF filed a Notice of Proposed Rulemaking (NPRM) on May 20, 2013, to amend the CCDF regulations. Simultaneous to and consistent with ACF’s efforts to reform the existing statute, legislators from both parties worked on historical reauthorizing legislation. The Child Care and Development Block Grant Act of 2014 passed in both chambers of Congress and was signed into law by the President on November 19, 2014 (PL 113-186). The much-anticipated CCDBG Act reauthorizes the program for the first time in 18 years and establishes minimum health and safety requirements for child care providers who receive CCDF subsidies. It also requires that states monitor providers to ensure the requirements are met. States must also provide more information to parents about child care quality, extend eligibility periods for families to at least 12 months, and establish other reforms to improve the quality of child care.

The CCDBG Act encodes into law many of the requirements ACF had proposed through rulemaking but had not yet implemented when the reauthorization passed. In addition to reiterating ACF’s 2011 guidance about comprehensive background checks, the new legislation requires all providers receiving CCDF subsidies (excluding relatives and providers caring for children in the child’s own home) to have pre-licensure inspections and at least one unannounced monitoring visit per year.

Notably, based on more than 500 comments submitted during the public comment period of the NPRM, state officials, foundations, professional organizations and advocacy organizations generally support a minimum floor of health and safety requirements and efforts to raise the overall quality of ECE settings. However, commenters expressed concerns about the costs states may incur. Some argued for significantly increasing the federal investment in the CCDF program to offset potential costs to states, while other organizations advocated for a better balance between federal and state shared expenses for licensing and administration. These issues will continue to be worked out as the CCDBG Act is implemented.

After reviewing the NPRM—which anticipated reforms in the CCDBG Act—several moved forward with the state legislative changes to expand health and safety provisions that will be required under the act. Policymakers, researchers, advocates, practitioners, families, and other stakeholders agree that the CCDBG Act takes important steps to improve the health, safety, and quality of care, which children need to thrive. Following the passage of the new legislation, ACF embarked on a multi-pronged plan to provide interim guidance and TA to states about implementation, and develop a new rule by 2016.
Health and Safety Provisions of the CCDBG Act of 2014

The CCDBG Act includes the following provisions:

- States must provide pre-service and ongoing health and safety training to all CCDF providers. Topic areas include: 1) prevention of shaken baby syndrome and abusive head trauma; 2) prevention and control of infectious diseases, including immunization; 3) hand washing and self-care; 4) medication administration; 5) management of food allergies; 6) safe sleep and prevention of Sudden Infant Death Syndrome (SIDS); 7) sanitary food handling; 8) building and physical premises safety; 9) emergency preparedness; 10) handling of hazardous materials; and 11) first aid and CPR.
- Trainings on social-emotional development, positive behavioral support, and other strategies to prevent preschool expulsion were suggested as activities associated with improving quality.
- States must establish age-appropriate child-to-staff ratios.
- States must develop health and safety standards related to first aid and CPR, prevention of Sudden Infant Death Syndrome (SIDS), and child abuse prevention.
- States can no longer rely solely on provider self-certification of health and safety requirements.
- States must perform at least one annual inspection and at least one pre-licensure inspection of CCDF providers and one annual fire, health, and safety inspection of license-exempt CCDF providers.
- All individuals who provide care for children and accept CCDF subsidies must undergo comprehensive background checks.

Case Study: The experience of reform in Georgia

Georgia has been reforming its ECE licensing administration, housed in Bright from the Start: The Department of Early Care and Learning (DECAL). Bobby Cagle led these efforts as DECAL commissioner from 2011-2014. In 2013, researchers at the Frank Porter Graham Institute conducted an evaluation of the state’s licensing and monitoring practices in overseeing 6,000 providers. Prior to Commissioner Cagle’s tenure, health and safety violations were predominately handled through technical assistance (TA), though the infrastructure and staffing were not in place to follow-up with ECE providers on their areas of non-compliance. Cagle’s approach, which garnered public support, combined increased enforcement action with TA.

Public and legislative support. Reform was facilitated in part through public outcry, after a series of articles in the local paper, The Atlanta-Journal Constitution on the safety of children in child care. One of DECAL’s first responses to the increased scrutiny was commissioned studies investigating the statewide prevalence of serious injuries in child care.


An analysis of state administrative data indicated that young children were much safer in center-based care than other ECE settings. The study also highlighted concerns over safe sleep practices. As is the case in a select number of other states, public attention and advocacy involving the families of young children who died in child care was crucial in enacting legislative changes to support health and safety. Following the death of a four month old child placed on his stomach to sleep, Jace’s Law was passed unanimously by the Georgia legislature, granting DECAL the authority to immediately close a family child care home in which a minor dies. In 2011, the legislature further granted DECAL emergency closure authority when there is any immediate risk to children—a significant improvement from the 90-day formal revocation process.

Transportation safety involving children being left unattended in vehicles has been another area highlighted in the media. Reforms now focus on issuing fines for transportation violations in such cases, as well as instituting new training requirements for providers and the child care consultants who monitor providers.

DECAL’s overall goal is to visit each facility twice a year, a goal they met in 80 percent of family child care homes and 67 percent of child care centers in 2012.

To address the number of children in unregulated care in Georgia, DECAL is advocating for a legislative change that would require regulation of family child care homes to begin when a provider cares for two, rather than three unrelated children.

By featuring current licensing reports on the DECAL homepage, parents, guardians, and other members of the public can access the information about how ECE facilities function, including how health and safety violations are addressed, and announcements of license revocations.

Change in staffing practices. Many states struggle with a high turnover rate for regulatory and support staff. This problem is compounded in Georgia because in the rural parts of the state, travel times are extensive for child care consultants who conduct monitoring visits. Since DECAL increased its enforcement authority in terms of the number of follow-up visits required when there is an adverse event at a facility, more demands have been placed on staff. DECAL has tried to address turnover and the additional burden it places on remaining staff by significantly expanding the number of child care consultants on staff. To address vacancies with minimal burden, new staff members are also cross-trained to handle “blended caseloads” that include different types of ECE facilities, and initial licensing visits as well as complaints. The DECAL management team considers reallocating staff resources an integral part of building a more sustainable infrastructure.

Infrastructure to support increased enforcement. In addition to providing technical assistance to ECE providers attempting to correct problems, DECAL has made concerted effort to ensure that

26 See Lexie’s Law in Kansas (2010), which required the Kansas Department of Health and Environment to create a database of licensed child care facilities that includes information about complaints that parents can access.
27 Bryant & Kelly, 2013
28 Bryant & Kelly, 2013
enforcement procedures are applied quickly, equitably, firmly, and predictably. DECAL is building an information technology system to support increased enforcement in a more timely manner. For example, whereas transportation violations could take up to 62 days to process manually, DECAL’s new data system will automatically generate legal action for repeat non-compliances in this area. DECAL has also taken a research-based approach to strengthening Georgia’s child care rules and regulations.

DECAL has developed an inter-rater reliability process in which multiple child care consultants conduct monitoring visits to the same facilities, and results of compliance determinations are compared by DECAL’s in-house research staff. DECAL also focuses monitoring visits around a set of 74 “core rules” that were deemed the most crucial to ensuring children’s health and safety. In 2014, Richard Fiene, a university-based investigator, determined that Georgia’s core rules moderately correlated with key indicators of compliance that emerged from licensing data from 2008-2012. Based on these findings, DECAL is considering changes to its compliance determination protocol to more closely align the core rules with compliance indicators.

Interagency communication and collaboration. Effective communication between the divisions within DECAL that handle child care regulation and Pre-K was reported, particularly about child care centers that are applying for a grant to house Georgia’s Pre-K classes. In these cases, the licensing and compliance status of the applicant must be available to make determinations about awarding Pre-K grants. The Pre-K delivery system in Georgia is a mix of public and private providers, and challenges have emerged over jurisdiction when Pre-K classes are housed in K-12 public schools that are regulated by independent school boards set up by the statutes of the state. Although licensing staff do not monitor Pre-K that is housed in public schools for licensing compliance, DECAL staff conduct other visits related to the implementation of learning guidelines and classroom quality. If concerns over health and safety emerge during these visits, they can be reported to the school system, which has a different enforcement system. Some of the health and safety concerns that have been raised about Pre-K in K-12 settings involve playgrounds and equipment designed for older children. DECAL is still working on several performance goals related to the visiting of all ECE providers more frequently, improving automation in data systems so enforcement can occur more quickly, advocating for legislative changes that will bring more informal providers under state regulation, and improving collaboration with other state agencies, including public schools.

29 Fiene, R. (2014). Georgia Child Care Licensing Study: Validating the Core Rule Differential Monitoring System. Middletown, PA: Research Institute for Key Indicators.
Case Study: The experience of reform in Kansas

Kansas is another state that has implemented more stringent health and safety regulations, in part in response to advocacy and media attention that surrounded fatalities in child care. State administrators reported that a history of legislative interest in reducing oversight and licensing requirements overlapped with an alarming rise in serious injuries and fatalities which peaked during the 2007 calendar year. The high incidence of fatalities prompted the Kansas Department of Health and the Environment, which houses Child Care Licensing, to implement new procedures to guide investigations of serious injury or sudden, possibly unexplained deaths in child care that were not required in existing statute.

The trend for infant mortality in Kansas was also higher than other states at the time, with Kansas ranked 40th out of all states in 2011. The Governor’s Blue Ribbon Panel on Infant Mortality highlighted these statistics, as well as the need to collect more robust and geographically specific data. In addition, in 2010, Kansas was ranked 46 out of all states in the annual report by Child Care Aware on state standards and oversight for family child care homes. At the time, one third of all child care providers were ‘registered family day care homes,’ which could serve up to six children without being subject to pre-inspection, or any ongoing monitoring or regulation, except in the event of a complaint.

The family of Lexie Engelman advocated for change after the 13-month old suffered fatal injuries in a family day care home in 2004 due to lack of supervision. The family day care home Lexie died in had been licensed. However, another family, the Patricks, lost their 18-month old Ava on her first day at an overcrowded, registered—but not licensed—family day care home in 2009. After learning of the problems with oversight, the Engelman and Patrick families organized a grassroots campaign focused on reform. As a result of partnerships in and out of government, public awareness that was raised through advocacy, and publicizing data about death and serious injury in child care, Lexie’s Law was enacted in 2010. The law strengthened inspection and health and safety requirements for child care providers and marked the first major change to the state’s child care standards in three decades.

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Lexie’s Law required that by the end of June, 2011, all registered providers transition to licensed providers. New health and safety regulations were effective by February 2012 that included regular inspection, training for providers, and the minimum requirement that new providers applying for a license have at least a high school diploma. New rules for the competent supervision of children in child care came into effect, as well as additional requirements for the protection of children. Lexie’s Law also established an online database with information about complaints and violations that families can access. The implementation of Lexie’s Law has boosted Kansas from 46th, to 3rd in Child Care Aware’s\textsuperscript{32} annual ranking, and state officials have used new data collected electronically from providers to target regulatory action and provide information to the public in a much more timely way. State officials report that more stringent regulations have greatly enhanced state capacity to protect children, in part by supporting providers.

Lessons learned from reform efforts in states

- Partnerships between state agencies and advocacy efforts that include families and practitioners can facilitate public and legislative support for reform.
- It is important to consider staff capacity, caseload and professional development needs when major changes in regulatory practice are being implemented.
- A robust data infrastructure is needed to support the collection of data on complaints and violations, as well as serious child injuries and deaths. This information could also be communicated to the public in a seamless and timely fashion.
- State-level statutory barriers in monitoring across settings can remain even if there is extensive cooperation between the agencies that regulate settings where children are served.

\textsuperscript{32} Child Care Aware of America (formerly NACCRRA). (2012). Leaving Children to Chance: NACCRRA’s Ranking of state standards and oversight for small family child care homes, 2012 update
Monitoring across ECE sectors

This section provides an overview of monitoring in other ECE sectors related to child care. Please see appendices for a comparison of factors significant to monitoring, such as statutes, monitoring goals, types of monitoring performed, data collection methods and federal and program level feedback. It is noteworthy that across sectors, reforms are being considered and implemented in ways that can be mutually informative to researchers and policymakers focused on specific program areas.

Head Start/Early Head Start. A federal program established in 1965, Head Start (HS) promotes school readiness for children from low-income families by offering comprehensive services. Early Head Start has served infants, toddlers, young children, and expectant parents since 1994. In fiscal year 2013, HS/EHS was funded to serve nearly one million children. Currently, the Office of Head Start (OHS) uses the Office of Head Start Monitoring System, which is aligned with five-year grant oversight to assess program services and quality.

The Designation Renewal System (DRS), which went into effect in 2011, introduced major changes to the Head Start monitoring system. The DRS uses monitoring outcomes to make designation determinations that increased accountability by specifying conditions about whether high-quality, comprehensive services are being offered to children and families. The new system informs decisions about whether a grantee needs to re-apply for funding, and effectively transformed all HS grants from indefinite funding to five-year grant periods. To date, four cohorts of Head Start grantees—including nearly 400 individual grantees—have been designated to compete for continued funding.

One of the seven conditions that will spark re-competition for a grantee is scores on the Classroom Assessment and Scoring Instrument (CLASS-Pre-K) falling below a minimum threshold, or in the lowest 10 percent of all grantees assessed in the three areas the instrument evaluates the quality of adult-child interactions in: emotional support, classroom organization or instructional support. Although changing teacher behavior and practice at the ground level that the CLASS evaluates is a daunting task, OHS leadership reports that they have implemented a wide range of TA supports, including adapting a case consultation approach to targeted technical assistance. This has been a successful strategy piloted with Tribal grantees, particularly in improving instructional support.

DRS implementation also created the opportunity for OHS to offer Birth-to-Five pilot awards to new grantees. The awards create the flexibility for grantees to design programs based on the current needs in their communities for serving children and families as they proceed on a continuum of care through the many transitions from expecting a child to the beginning of a child’s formal schooling. OHS is currently implementing a risk-based assessment model that will

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allow TA and monitoring resources to be further targeted to programs that are at the greatest risk of failing to maintain safe and healthy ECE environments.

**State funded Pre-Kindergarten Programs.** State-funded prekindergarten programs have grown in recent years and are an important part of the President’s Early Learning Initiative. However, systematic implementation or monitoring of these programs by the states that operate them is currently limited. To date, there are more than 54 different public Pre-K initiatives in 40 states and territories which serve more than one million children. In most states, Pre-K is a mixed delivery system. Some providers are part of the K-12 public school system, monitored by State Departments of Education. Others are HS grantees subject to federal monitoring. Still others are private entities that receive state grants to administer services and are subject to regulation by state licensing agencies.

Monitoring often consists of evaluating or tracking the implementation of early learning standards for Pre-K, yet in many states that offer these services, programs are not required to adhere to standards. The frequency of monitoring visits to state Pre-K programs varies widely across states, and Pre-K stakeholders—including philanthropists, advocates, business leaders, and elected officials—may not be well versed in assessment methods or health and safety standards. Monitoring data may include classroom quality, teacher efforts to support student learning, information about the quality of teacher-child interactions, and facility and safety practices.

Documenting children’s learning outcomes is an increasingly common way to assess State Pre-K providers and make determinations about funding. As states curtailed their budgets during from 2008-2012, they eliminated monitoring requirements that were put in place in the early 2000s. Tension remains between the number of slots available for students and the budget for monitoring and quality improvement. The Preschool Development Grant funding opportunities first made available in 2014, required states to describe the system they intended to put in place for monitoring subgrantees that will be providing high-quality Pre-K services. This requirement was put in place despite a lack of standardization and mandate for monitoring protocols in existing Pre-K systems. It is likely that states that receive this funding either through a development or expansion track will put in place more sophisticated monitoring and evaluation systems, and are offered flexibility in designing these systems.

**Early Intervention and Special Education (Parts B & C of IDEA).** US Department of Education’s Office of Special Education (OSEP) monitors compliance with the Individuals with Disabilities with Education Act (IDEA). Part C of IDEA covers infants and toddlers with disabilities who are typically served in their homes, child care settings, or other naturalistic, least restrictive

38 Ackerman & Coley, 2014.
39 Barnett et al., 2012.
settings. Part B includes preschoolers with disabilities. State programs are monitored to ensure program compliance with federal requirements for services. From 2003-2012, federal monitoring teams conducted site visits. The visits involved interviews with stakeholders and record reviews. Historically, the focus of OSEP’s monitoring has been on compliance with regulations. However, OSEP is now moving toward a Results Driven Accountability (RDA) process that will focus on child and family outcomes.41

In June 2014, the US Department of Education (ED) announced42 that it was making a formal shift in the way it oversees the effectiveness of state special education programs by adapting the RDA process. The new system will no longer focus exclusively on procedural requirements, such as the timeliness of evaluations and service delivery. It will now also include educational outcomes, and assessments of proficiency gaps between students involved in special education and general education. These reforms will allow federal policymakers and program staff to consider data on how students are actually performing, rather than just compliance issues, which states have made great strides in improving.

**The Department of Defense (DOD) child care programs.** The U.S. military has invested heavily in high-quality child care and in the past two decades has transformed its system from one of the most poorly rated systems in the country to a model for the nation.43,44 The DOD runs the largest employer-sponsored child care system, serving 200,000 children domestically and internationally, and considers high-quality, affordable care a major component of combat readiness for military families.

Monitoring in military child care is grounded in certification by the military, accreditation by national organizations, and frequent inspections (four times per year). At least one of these monitoring visits must include an interdisciplinary team with an ECE expert. ECE settings certified by the military include family and group child care homes, centers, and Pre-K programs. Military child care programs are certified for one-year, and serious violations uncovered during monitoring visits result in immediate closure. Information about violations is publicly reported.

Waiting lists for military child care are common, and since 2000, it has also been possible to receive subsidies for off-installation civilian ECE providers that are state licensed. In an ongoing effort to understand the extent to which there are comparable levels of quality in non-military child care in states, the DOD is currently analyzing state efforts on quality improvement, which includes state Quality Rating and Improvement Systems (QRIS).

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As is the case in other ECE sectors, the DOD programs are currently in the midst of reform. For the first time since 1996, the DOD in August of 2014 issued new guidance and instructions\(^45\) for providing care. Some of these reforms were to standardize inspections across branches of the military. The service branches have reached consensus on a common framework for inspection criteria that groups them into three main categories of 1) general management; 2) facility, health, safety and risk management; and 3) programming. Each service branch compared current criteria to ensure they inspect the same items. Further standardization is currently underway that will involve the number of classrooms observed and the number of files reviewed during inspections. Software is being developed to support the inspection visit and report writing. These efforts will ensure that regardless of how a military family enters the child care system, the family has access to the same high level of quality.

Across ECE programs described above, feedback from monitoring is used to target technical assistance resources, and by individual programs for the purposes of quality improvement. OSEP and the DOD post monitoring reports publically. Several types of programs are subject to monitoring by multiple regulatory systems with little collaboration across federal and state agencies. Almost all of these parallel systems are engaged in reform that would require greater consideration of child and family outcomes.

**Third party accreditation and Quality Rating and Improvement Systems (QRIS)**

Quality in ECE settings has multiple dimensions. It has been defined as the aspects of the environment and children’s experiences that nurture child development.\(^46\) High-quality ECE settings have been associated with better language development, math, and reading skills at kindergarten entry.\(^47,48\) Burchinal and colleagues\(^49\) identified structural components of quality as class size, teacher-child ratios, staff turnover, salaries, training, and curriculum. These structural components of quality are related to what has been identified as process-level components, including teacher beliefs, and teacher-child interactions.\(^50\) There is no single method of evaluating quality, and the definitions of quality could vary from different stakeholder perspectives.\(^51\) Some states have additional goals for their regulatory systems, including using licensing as a foundation for building quality improvement systems.

As has been discussed in other sections of this paper, licensing generally focuses on basic issues of health and safety, while QRIS and national accreditation move ECE programs to higher levels


of quality. A widely promoted strategy to improve quality in ECE is voluntary accreditation through a national organization, such as NAEYC and NAFCC. NAEYC offers a five-year accreditation to school and center-based providers and NAFCC offers a three-year accreditation to family child care providers. Both organizations begin the accreditation process with a self-study. In addition to an on-site observation, accreditation by both organizations involves a commitment to upholding research-based standards, meeting credential and training requirements for providers, program administrators, and teaching staff, and meeting the requirements for the highest level of regulation to operate a facility by the authorized regulatory agency—the state licensing agency, state board of education, or military. Maintaining each kind of accreditation involves annual reporting, updates and agreeing to announced and/or unannounced (in the case of NAEYC) visits before each renewal. Whitebook\textsuperscript{52} noted that public funds, including CCDF funds, are increasingly directed to accredited programs as a way to supplement what is sometimes limited quality assurance provided by compliance with state licensing systems.

**Health and safety in accredited programs.** Research is limited on the relationship between state child care regulations and accreditation. However, the presumption in the field is that accredited programs exceed the floor of minimum health and safety standards regulated by state licensing agencies. Apple\textsuperscript{53} used descriptive statistics to examine the relation between quality indicators found in state regulations and the number of NAEYC accredited programs in states. Apple found that as maximum staff-child ratios decrease and minimum pre-service teacher education qualifications increase in state child care regulations, the number of ECE programs that have obtained or are seeking accreditation increases. Winterbottom and Jones\textsuperscript{54} studied the relationship between accreditation and licensing violations in the state of Florida. Comparing licensing data on the 23 percent of ECE centers that were accredited from 2007-2010 with non-accredited child care centers, Winterbottom and Jones determined that children were more at-risk for both imminent and less serious health and safety violations if they attended a non-accredited ECE center. Although the number of statewide health and safety violations increased over time among all facilities, presumably because of increased enforcement, accredited facilities experienced a lower rate of increase.

Accredited facilities have demonstrated that they are meeting standards in the structural areas of small class size, teacher-child ratios, turnover, staff salaries, training, curriculum, and the education level of the teacher. Because there is considerable variability in state licensing, accreditation offers an alternative means to ensure that children are in safe environments that are meeting their developmental needs.


\textsuperscript{54} Winterbottom & Jones, 2014
Lessons learned from the Race to the Top—Early Learning Challenge (RTT—ELC)

The Race to the Top—Early Learning Challenge (RTT—ELC) is a discretionary grant program jointly administered by the U.S. Department s of Education and Health and Human Services, and is an important part of the President’s early learning agenda.\(^5^5\) RTT—ELC focuses on improving early learning and development by supporting states in coordinating across agencies and programs that serve young children and their families from vulnerable communities. Goals of the program include raising the quality of ECE programs and increasing access to high-quality programs for young children who are disadvantaged, so that all children enter kindergarten ready to learn.

The five key areas of reform are:\(^5^6\)

- Successful state systems based on broad stakeholder support and effective governance.
- High-quality, accountable programs aligned across Head Start, child care, state Pre-K, and Early Intervention and Special Education.
- Promoting early learning and development outcomes through the implementation of statewide standards, and implementing comprehensive assessments aligned to standards.
- Building a well-trained early childhood workforce through professional development, and incentives to improve knowledge, skills, and abilities to promote children’s learning and development.
- Measuring outcomes and progress through evaluation that will address children’s outcomes across domains. Building robust data systems that will support quality improvement.

Quality Rating and Improvement Systems (QRIS). There are three cohorts encompassing 20 states that were awarded RTT—ELC grants from 2011-2013, with a total investment of over $1 billion. The one absolute priority of the RTT—ELC program is the alignment of resources to create a common, statewide tiered quality rating and improvement systems (QRIS) that is inclusive of all ECE programs. QRIS is an approach intended to assess, improve, and communicate levels of quality in ECE programs. QRIS awards quality ratings to ECE programs that meet a set of defined program standards, and are designed to help families understand the quality of ECE programs available for their children. Even prior to RTT—ELC, nearly half of all states and the District of Columbia were operating statewide QRIS, and almost all other states were planning or piloting them.\(^5^7\) Oklahoma instituted the first system in 1998, and North Carolina followed in 1999. QRIS that existed in RTT—ELC grantee states prior to reform was typically focused on licensed child care and family and group child care homes. Existing QRIS in many states has historically been tied to a tiered reimbursement rate; ECE providers that were designated at higher levels of quality could obtain a higher rate of CCDF subsidies. QRIS also

traditionally offered a pathway for credentialed programs to enter at a higher quality level, in part through a policy strategy that has become increasingly common in states known as tiered reimbursement. Through tiered reimbursement, child care providers that are offering higher quality care are eligible to receive a reimbursement rate that is higher than the maximum rate set by the state when they care for a child who is receiving CCDF subsidies. NAEYC noted in 2012 that 27 states and the District of Columbia had tiered CCDF reimbursement rates for center and family and group child care homes linked to accreditation.58

QRIS systems had not been traditionally designed to include funding streams, standards, or requirements for ECE providers who were Head Start grantees, state Pre-K, or special education providers. However, RTT—ELC encouraged states to include all ECE programs, and grantees had to re-conceptualize their approach in order to create an integrated QRIS. In 2012, ECE financing and policy expert Louise Stoney59 reviewed the QRIS sections of the first round of applications to the program, which consisted of 35 states and the District of Columbia. Stoney noted that several states also envisioned QRIS as an opportunity to align monitoring and technical assistance. North Carolina and Oregon made this the cornerstone of their ECE reform plan. Illinois, Kentucky, and New Mexico also focused on creating an integrated process so ECE providers with different funding streams only have to be monitored once.

At the third annual RTT—ELC grantee meeting in April 2014, the 20 grantees shared more of their views about the implementation challenges of building and validating a QRIS. RTT—ELC states have also been making decisions about how to include licensing in their QRIS. After acting on feedback from providers that regulation and quality improvement should be separate goals, Washington State did not initially include state licensing agencies in their QRIS planning and outreach. Because Washington envisions its QRIS as a cornerstone that grounds different funding streams, the state team is currently re-envisioning their licensing system to align all standards with QRIS. In Illinois, outreach has been targeted to child care consultants (monitoring staff) from the state licensing agency. The QRIS team is currently making regional visits to child care consultants to provide information about QRIS, research, and validation. The Illinois QRIS team received positive feedback from child care consultants, some even asking to participate in trainings available to providers through QRIS. Maryland has gone even farther in aligning efforts with state licensing staff. Part of the training for quality assurance specialists that are members of Maryland’s QRIS is accompanying state licensing consultants on monitoring visits.

There is still some tension between the minimum health and safety standards that are coded in licensing regulations and higher levels of quality QRIS incentivizes by publicly rating programs and offering financial resources for attaining different levels of quality. The tension is apparent in the decision of several states, including Illinois and Wisconsin, to remove personal care

routines, such as hygiene, and sanitation requirements from QRIS, since this is viewed as within the realm of licensing. Other states expressed that their licensing agencies had not been involved in the RTT-ELC or other ECE reform plans, and are not always amenable to the kind of systems change that these reforms require. Representatives from Massachusetts expressed that in their experience co-location of child care licensing and QRIS staff matters in obtaining the buy-in of licensing staff. In Massachusetts, the licensing division is subsumed under the Executive Office of Education, Early Learning Division, and Georgia has a similar governance structure. In Illinois and several other states, the licensing division is in a different agency than QRIS and there are limited opportunities for collaboration or shared planning.

A benefit of aligning ECE systems in quality improvement is to encourage the participation of State Pre-K and Head Start providers in QRIS. States have various strategies for attracting these providers to the system. Several states offer incentives to adopt QRIS, such as Washington’s grants for Head Start Centers to become local, regional, or state resource centers that provide technical assistance or training to other ECE providers. Washington has partnered with the Bill & Melinda Gates Foundation in funding these awards, and some of the grants to Head Start providers can be substantial, depending on how extensively a Head Start provider can offer training and support. Almost all RTT—ELC grantees have reciprocity programs in place for Head Start and Pre-K providers to enter the QRIS at a higher level or rating, but many states also require that providers supply evidence from their own federal or state reviews that they have met minimum thresholds in areas such as quality of classroom environments (based on environmental rating scales), the curriculum, child assessment, inclusion of children with or at-risk for disabilities, and program administration.

Several states have identified pathways for providers joining QRIS. Illinois has mapped the standards for different kinds of providers in their state to attain each QRIS level. To further reduce the burden on ECE programs that have already committed to quality improvement, some RTT—ELC grantees also have tracts for nationally accredited programs to join QRIS. However, several states struggled with alignment between newly reformed and ambitious QRIS and national accreditation standards. Massachusetts recently partnered with NAEYC to conduct a comparison between national accreditation standards and their QRIS. The study found an 80 percent overlap, making it difficult to simply offer entry at a particular level of quality to accredited ECE providers. Massachusetts is still considering these results in terms of how to reduce the number of initial and ongoing quality visits to accredited ECE programs.

Some RTT—ELC states have mandated that participation of Universal Pre-K programs be included in QRIS. In other states, Pre-K participation is voluntary. However, even in states with mandatory participation, it has been difficult to apply all the QRIS standards, particularly to Pre-K programs in K-12 facilities. Many of the RTT—ELC teams include state Pre-K directors in efforts to address these issues. Just as there is collaboration and cross-training between QRIS and state licensing staff, there are opportunities to work closely together and conduct joint monitoring visits with education staff. For example, Ohio and Georgia reported a high level of collaboration.
In summary, the lessons learned from the QRIS features in RTT—ELC are instructive in thinking about larger ECE policy about the layering of funding streams, collaboration between agencies, and how to develop early learning standards of quality that are applicable to different kinds of ECE providers. As the RTT—ELC states continue to grapple with reducing the burden of licensing, quality, monitoring, and federal visits, the solutions and compromises they arrive at by engaging stakeholders throughout ECE systems will undoubtedly be instructive to all states.

**Brief overview of monitoring in other sectors (child welfare and health care)**

This section summarizes the purposes and goals of monitoring in child welfare and health care, analogous sectors that have reformed their inspection and monitoring systems in recent years.

**Monitoring and reform in the child welfare systems**

Monitoring in child welfare had historically been compliance driven. In 2000, regulatory changes involved a federal mandate for state accountability in achieving quantifiable outcomes for children and families involved in the child welfare system. Increased federal oversight occurred through the rulemaking process for the Adoption and Safe Families Act of 1997 (ASFA, PL 105-89).60 The new federal outcomes represented a major shift in focus of child welfare thinking towards children’s health and safety concerns, and state performance in operating child welfare and child protection programs is now assessed through the Child and Family Services Reviews (CFSRs). According to a Children’s Bureau factsheet, CFSRs enable the Bureau:

1. To ensure conformity with federal child welfare requirements;
2. Determine what is actually happening to children and families as they are engaged in child welfare services; and
3. Assist states to enhance their capacity to help children and families achieve positive outcomes.61

More specifically, CFSRs measure seven child and family outcomes in the areas of safety, permanency, and well-being and seven systematic factors. The systematic factors include the effectiveness of the state’s systems for child welfare information, case review, and quality assurance; training of child welfare staff, parents, and other stakeholders; the services that support children and families; the agency’s responsiveness to the community; and foster and adoptive parent licensing, recruitment, and retention. CFSRs are conducted in partnership with State child welfare agency staff and are structured to help states identify strengths and weaknesses. Part of the CSFR involves a self-assessment by states with respect to national performance measures, determined by the Children’s Bureau, a federal agency. Performance standards focus on child safety, permanency of living situations, and family and child well-being. The Statewide Assessment is followed by a weeklong, labor intensive onsite review conducted by a federal-state team and involving an administrative record review and

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interviews with children and families served by the child welfare system and community stakeholders. Ninety percent of cases reviewed must be judged to have substantially achieved the outcomes and systematic factors being assessed. States determined not to be in “substantial conformity” in all required areas must develop a Program Improvement Plan (PIP), for which TA and additional monitoring is provided. Financial penalties are levied against states that do not achieve required improvements. State PIPs must be developed in collaboration with community stakeholders, including representatives from the judicial system, mental health practitioners, and state legislators.

The first round of CFSRs took place between 2000 and 2004, and the second round was from 2007 to 2010. The Children’s Bureau set very high standards of performance for the CFSR, and no states achieved substantial conformity on child and family outcomes. Therefore, the Children’s Bureau took a step back to consider how to improve the CFSR process, and in the summer of 2014 issued new guidance for states on the next rounds of CFSRs, to be conducted between 2015-2018. The Children’s Bureau is also currently encouraging States to strengthen their own self-monitoring tools using the principles of continuous quality improvement (CQI).

Despite performance gaps, there are instances of states engaging in the CSFR and PIP process to move forward on self-evaluation and quality improvement. The National Conference of State Legislatures documented several instances of child welfare administrators partnering with state legislators and other community stakeholders over CFSR results in ways that were productive in moving state systems reform efforts forward, as well as building the infrastructure to finance these changes. In the recent history of child welfare reform, states have expressed concerns about being held accountable for child well-being largely because child outcomes are dependent on other, related systems. Although state officials, advocates, and researchers have been critical about the measures used in the reviews, there is consensus among stakeholders that the focus on child and family outcomes is appropriate and constituted a much-needed shift in child welfare monitoring. As the capacity of states to routinely collect and use data to examine their work and make data-driven decisions is built through CQI frameworks, the role of federal monitoring is being re-configured.

**Monitoring of patient safety and quality in health care delivery settings**

Health care delivery is another sector that prioritizes the safety and quality of care. Health care monitoring and quality improvement systems have gone through significant reform in the past several years, which could be instructive to how federal and state governments are considering re-envisioning and improving monitoring in ECE settings.

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63 http://www.acf.hhs.gov/programs/cb/monitoring/child-family-services-reviews/round3
The modern culture of patient safety in U.S. hospitals coalesced after the Institute of Medicine (IOM) released a report in 1999 entitled, To Err is Human: Building a Safer Health System. The report highlighted the tens of thousands of deaths each year attributable to preventable medical errors, and called for comprehensive efforts across sectors to improve patient safety. Problematic areas cited by the report include: a fragmented health care delivery system, a lack of attention to preventable medical errors in the systems that license health care providers, flaws in the medical liability system, and the lack of financial incentive for health care organizations to improve safety and quality of care.

Regulatory groups have instituted major patient-safety initiatives that have been undertaken in the years since the IOM report, through professional organizations, and private, for-profit companies. The IOM report noted that licensing and accreditation standards were the main accountability drivers for health care organizations and professionals; yet, at the time, neither focused on patient health and safety. An influential party in health and safety monitoring of health care organizations is the third party credentialing organization, the Joint Commission (TJC), formerly known as the Joint Commission on Accreditation of Health Care Organizations (JCAHO). The Joint Commission has been classified as a quasi-regulatory entity, and it is an independent, not-for-profit organization that accredits and certifies more than 20,000 hospitals across the country. Hospitals that participate in Medicare and Medicaid are required to undergo a regulatory review by the Centers for Medicare & Medicaid Services (CMS), or alternatively, CMS enables hospital participation if they are accredited by a private body, such as The Joint Commission, and a select few other organizations that have been recently granted deeming authority.

The Joint Commission operates on a three-year accreditation cycle, and transitioned from pre-announced, to unannounced, full-survey visits in 2008. Beginning in 2001, the Joint Commission adapted some of the recommendations in the IOM report and introduced new standards that focused directly on patient safety and quality. Surveys are conducted every 18-39 months after each unannounced visit. Surveyors currently talk to patients and caregivers whereas prior to 1999, the focus of surveys was a records and policies review. Surveys are performed to verify compliance with standards that encompass performance expectations, structures, and processes in place for quality health care. Survey reports include Requirements for Improvement (RFI), and organizations have 45-60 days to respond to these reports before accreditation decisions are made. Beginning in 2002, accredited hospitals began collecting data on core performance measures and their outcomes. Indicator scores are public, and comparisons can be made between hospitals. Provider participation in this data collection and reporting is linked to CMS reimbursements.

Current TJC goals for health care organizations include requiring procedures for identifying and responding to caregivers who create a negative culture, and promoting patient participation in

hospital safety. Critiques from the research community have included concerns that patient safety goals have been enacted without sufficient guidance, and that TJC’s approaches to patient safety goals lack strong supporting evidence. Additionally, in 2004, the Government Accountability Office (GAO) concluded that 78 percent of the time, the Joint Commission survey process did not identify serious deficiencies in patient safety that state auditors detected, resulting in the recommendation that more federal oversight be required over TJC accreditation activities. TJC also does not mandate hospitals to report on outcome progress related to patient safety goals. Accreditation has served as a quality indicator and has functioned as a placeholder for public regulation of hospital quality.

State regulation efforts in the patient safety movement have included requirements to report serious adverse events and strong encouragement that hospitals conduct error analyses. Other recent public sector efforts have included federal grant support for health information technology (IT) implementation, and increasing engagement of HHS’s Agency for Health Care Research & Quality (AHRQ). AHRQ has sponsored the development and dissemination of a quality indicators (QI) toolkit that measures hospital quality and safety using inpatient data. This tool can be used for hospital self-assessment. AHRQ also funds a Medical Liability Reform and Patient Safety Grant Initiative; which aims to strengthen the link between patient safety and medical liability reforms.

TJC is the main source of health care organization credentialing, but appears to have limited effectiveness in improving patient safety outcomes, and has been the subject of more than one Government Accountability Office study about conflict of interest. Keenan recently documented private sector alternatives to TJC that have recently been granted deeming authority by CMS and appear to be engaging in promising practices that address some of the concerns that have plagued TJC. The Health Care Facilities Accreditation Program (HFAP) offers accreditation standards that are closely aligned with CMS, and also integrates information from recent, successful public health campaigns. Other newly granted credentialing organizations engage in more outcome-based, rather than inspection-focused, surveys.

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77 Kenniston, E. 2011
Lessons learned from child welfare and health care monitoring

- Reform is an iterative process that requires feedback from states and other stakeholders, including practitioners, family members, and advocates.
- Assessing child, family, or patient outcomes is a labor-intensive and complicated process that may require several revisions before achieving the right balance of federal and state engagement.
- The goals of an increased federal or third party presence should include building the data and infrastructure capacity for self-monitoring that could inform quality improvement.
- Third party approaches to credentialing and standards development on safety are promising, but require alignment with federal policy and oversight of the mandatory reporting of outcomes.

The Differential Monitoring Model and Statistical/Risk-Based Approaches

A blanket monitoring system that treats all organizations equally can be inefficient. A better approach is to base monitoring and oversight on past performance or on an assessment of risk for non-compliance with standards. Such “differential monitoring” approaches have garnered attention as methods to better target limited funds and resources.

Federal and state research has explored methods for determining when to adjust the frequency or depth of monitoring across ECE settings based on a provider’s level of compliance with regulations. These approaches are called differential monitoring, of which statistical/ risk-based monitoring are subtypes. These methods are consistent with NARA recommendations for best practices, which specifies that monitoring agencies:

Maintain a research-based risk-assessment method whereby industry-wide and facility-specific risks, including both immediate and cumulative risks, are identified and prioritized; focuses inspections and technical assistance accordingly; and, applies the agency’s enforcement continuum systematically to avert or abate priority risks, to build consistent compliance, and to improve overall consumer protection across all relevant domains.78

Richard Fiene, a researcher from Penn State University, has spent several years in consultation with states and the federal government formulating key indicator and risk assessment approaches to differential monitoring. He has helped implement these approaches in states, sometimes in conjunction with NARA. His work suggests that statistical and risk-based approach to monitoring have the benefit of reducing overlap between multiple systems. Data from across systems can be integrated and analyzed to tease apart correlations and support greater efficiency in data collection strategies, monitoring activities, and technical assistance

78 NARA, 2009
decisions. Although Fiene’s work is extensive and well documented, it has not been extensively subjected to peer-review.

In this section, two approaches to differential monitoring will be discussed: key indicators and risk assessment. Examples of how each leads to differential monitoring will be addressed within each section with case examples.

**Elements of a key indicator approach.** An abbreviated approach, through the use of key indicators in monitoring allows the regulatory agency to track key indicators of compliance, better target monitoring and technical assistance resources, and address compliance deterioration. Key indicators are standards that demonstrate statistical correlation with broader compliance or non-compliance on performance standards and regulations. Examples of key indicators that are relevant to ECE settings include:

- Background checks and medical clearances for teachers and staff;
- Cleanliness of the physical space;
- Securing of hazardous substances;
- Ensuring teachers and staff complete pre-service and ongoing trainings;
- Maintaining appropriate child: staff ratios for different age ranges of children;
- Safety of outdoor premises; and
- Maintenance of medical records for children

Under a key indicator approach, agencies with oversight over early childhood programs are able to assess preliminary compliance using key indicators of health and safety or program integrity, and base monitoring, technical assistance, and other decisions on this review. An indicator-based approach to monitoring increases agencies’ ability to more efficiently target scarce monitoring and technical assistance resources. Compliance or non-compliance with key indicators in this approach triggers different consequences for programs. For example, programs that demonstrate compliance with key indicators might receive abbreviated, targeted, or focused monitoring reviews, while programs that indicate significant non-compliance with key indicators could receive more comprehensive reviews, technical assistance, and other consequences. To prevent programs from “gaming” the system, a larger number of key indicators that could trigger consequences could rotate over time, so that programs do not strive for compliance with key indicators to the detriment of other aspects of program quality. Finally, self-inspection alone should not be part of a risk-based monitoring system.

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Case Study: The Head Start Key Indicator (HSKI) Pilot Study. The Office of Head Start (OHS) has been working on a Key Indicator Project and Pilot Study with Richard Fiene of Penn State University and other researchers and experts to determine which data elements collected by OHS (from monitoring and other reporting) are correlated with quality. The team is developing a list of key indicators that could be collected and monitored to assess compliance and risk and eventually drive monitoring, technical assistance, and other decisions.

The HSKI-C Protocol is a research-based monitoring instrument designed to identify grantees at low risk for non-compliance and, as a result, should receive differential monitoring. An abbreviated version of the comprehensive monitoring protocols, the HSKI-C protocol is comprised of 27 compliance measures that were selected based on how strongly they differentiated between high- and low-performing grantees. The HSKI-C covers the following review areas:

- Management Systems & Program Governance
- Comprehensive Services & School Readiness
- Fiscal Integrity

The HSKI-C is a critical part of the aligned monitoring system that will be implemented in FY 2015. OHS designed the aligned monitoring system to provide a different review process based on the grantee’s history.

The Comprehensive Monitoring Process and the Differential Monitoring Process. The monitoring process that a grantee receives is determined by whether it meets a specific set of criteria. The criteria include:

- No findings on the previous review cycle,
- No fiscal findings in the past two review cycles,
- No findings in the annual audits,
- No Designation Renewal System (DRS) criteria met,
- No significant program changes (e.g., changes in program leadership), and
- No concerns identified through input from the Regional Office.

Grantees that do not meet the above listed criteria will engage in the Comprehensive Monitoring Process. Those grantees that do meet the criteria will engage in the Differential Monitoring Process.

Comprehensive Monitoring Process: The Comprehensive Monitoring Process includes the following individual review events conducted over the first 3 years of a 5-year grant cycle: Environmental Health and Safety, Fiscal Integrity, the Classroom Assessment Scoring System (CLASS), Management Systems & Program Governance, and Comprehensive Services and School Readiness.

Differential Monitoring Process: In an effort to recognize grantees that have demonstrated strong performance through a history of compliance, OHS developed the Differential Monitoring Process. Grantees eligible for this process will first receive the HSKI-C Review Event. Head Start grantees that are successful in the HSKI-C Review Event will receive the Environmental Health and Safety and CLASS Review Events. EHS grantees that are successful will receive Environmental Health and Safety and Comprehensive Services and School Readiness since CLASS is not used in EHS programs. Grantees that are unsuccessful in the HSKI-C Review Event, meaning one or more indicators are triggered during their HSKI-C Review event, will go through the Comprehensive Monitoring Process.
The HSKI-C Tool was developed in consultation with Richard Fiene. With Fiene’s support, the OHS team analyzed monitoring data from FY 2012-FY 2014 (N = 1,099) to identify compliance measures that were 1) best suited to differentiate between high-performing grantees (i.e., compliant grantees) and low-performing grantees (i.e., grantees with findings) and 2) tended to be cited in reviews that have the most findings. Psychometric analysis examined whether HSKI-C review results agreed with the results of a comprehensive review. Based on FY2014 data, the results of the 27-item HSKI-C had a 91 percent agreement rate with the comprehensive review results.

The monitoring system includes the ability to capture specific and timely performance metrics (including data from environmental rating scales such as CLASS), demographic data, fiscal data, and service utilization information on the children and families served. This would represent a major resource shift in the short term but could potentially lead to greater efficiency and better use of data that are collected. This constitutes a way of re-structuring and re-framing the resources that already exist for monitoring by making sure programs with low compliance are seen more often. Differential monitoring in Head Start represents a budget-neutral change in which resources that are currently being devoted to comprehensive reviews for all grantees would be targeted to screening for those grantees who are performing well and comprehensive reviews for those grantees who need the support. In this aligned monitoring system, grantees who receive differential monitoring in one 5-year grant cycle would be required to have a comprehensive monitoring review in the next cycle. Grantees that are found to be out of compliance through the HSKI-C would have to undergo comprehensive reviews more frequently.

The key indicator approach is a promising one for child care monitoring systems, and in fact, many states currently use these methods. Using 2011 data, NCCCQI found that more than 50 percent of states are working on methods that target monitoring and TA resources. This approach will help ensure that support is made available to ECE programs who are struggling with licensing compliance. These states include Kansas, Washington, Illinois, and California. Child care licensing staff from Kansas recently articulated the benefits of a key indicator system, including:

- The regulatory agency is able to spend more time monitoring and providing TA to noncompliant ECE providers;
- A reduction of the administrative burden for compliant providers through shorter inspections;

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• Children in out-of-home care are better protected in a more efficient system; and
• Taxpayers are assured that strong licensing continues, even in the face of reductions in resources.

Kansas has been implementing their key indicator system since 2013, and has developed a key indicator inspection process for: 1) determining which providers are eligible for indicator inspections; 2) conducting inspections measuring compliance with statistically identified indicator regulations; 3) measuring regulations identified at random; 4) expanding the scope of indicator inspections if violations are detected; 5) conducting comprehensive inspections every third year in addition to interim indicator inspections; and 6) re-calculating indicators every three years. Other states are in different phases of development and implementation of their key indicator systems, and to move forward with these efforts, robust state licensing data should be used as a basis for determining the statistical power of key indicators, similar to the way Tri-Annual Review data were used to validate HSKI.

**Elements of a risk assessment approach.** A risk assessment approach identifies rules or regulations that place children at greatest risk of injury or death. Unlike the key indicator approach, the risk assessment approach does not statistically predict overall compliance with licensing rules or regulations. Instead, risk assessment helps determine the rules or regulations that pose a greater risk of harm to children if violated. Risk assessment is most often used to classify or categorize violations, distinguish levels of regulatory compliance, or determine enforcement actions using categories of violations. There are a number of ways licensing regulations can be assessed for risk, including the following:

- Probability of harm (high, medium, low);
- Severity of harm (extreme, serious, moderate, low); or
- Frequency of violations (numerous, repeated) based on those considered most critical to protecting children’s health and safety

The real strength of key indicator and risk assessment approaches is when they are used in tandem rather than individually, which is the case in Illinois that is described below. Fiene has advocated the combined approach as being the most cost effective and efficient differential monitoring system.

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Case Study: The development of a weighted key indicator licensing system in Illinois. The Division of Licensing and Monitoring at the Illinois Department of Children and Family Services (DCFS) is responsible for upholding Illinois licensing standards in 8,000 day care homes (family child care), 3,000 day care centers, and 700 group day care homes across the state. In FY 2013, the division investigated more than 1,300 complaints about ECE providers. Currently, each licensed ECE provider should receive an annual, unannounced, comprehensive inspection visit.

For many years in Illinois, momentum had been building for a different approach to licensing and enforcement. Concerns were raised by the advocacy community and agency staffs about the high caseloads experienced by child care licensing staff at DCFS, and ECE providers were generally frustrated with the efficiency and timeliness of the licensing process. Further straining the system, DCFS, which administers child protective services, experienced budget cuts in a number of funding cycles. These issues were highlighted in 2009 when early childhood offices across agencies were co-located in the Governor’s Office of Early Learning. The funding for actually reforming the licensing system came together through the state’s Race to the Top—Early Learning Challenge (RTT—ELC) award.

Illinois is currently working with a team from NARA that includes Richard Fiene on a key indicator approach that in Illinois will be called a “weighted licensing key indicator system.” The system will assign weights or numerical scores to each section of Illinois’s Day Care Home regulations based on the relative risk to children if the regulation is not met. As part of the development process, DCFS provided NARA with several years of data on serious injuries and deaths.

NARA is also administering a survey in English, Spanish, and Polish to relevant stakeholders, including ECE providers and practitioners associated with centers and family child care homes. When these surveys are complete, NARA will analyze the numerical scores assigned by each respondent and calculate a mean weight for each regulatory item. The mean weights obtained from this analysis will be the basis for the weighted licensing system, which will ultimately focus on more serious violations. The weighted system will take into account provider licensing and inspection histories. Providers with few noted concerns will experience more streamlined inspections. The weighted system will eventually be dovetailed with the key indicator system that is being developed at the same time. This weighted licensing key indicator system will concurrently provide Illinois with statistical predictor rules and high risk rules.

A depiction of the Illinois’ QRIS

The state’s QRIS, ExceleRate, a major RTT-ELC implementation project, facilitated reform of the licensing system. The state is working to more fully integrate DCFS licensing with the larger system of supports for early care and education. Licensed providers, for example, are automatically enrolled in ExceleRate. The state hopes that administering inspections more efficiently will free child care licensing staff to mentor providers on attaining higher levels of quality, and licensing staff are excited about the new roles they may be able to take on through the weighted system.
These latest developments in designing and implementing differential monitoring strategies will continue as states consider ways to increase the efficiency of their monitoring systems. Research is also currently underway that compares results from monitoring systems associated with licensing, QRIS, and key indicator and risk assessment systems. In some cases where state licensing or monitoring compliance records are extensive, Fiene has also conducted internal validation studies of key indicator systems. In these cases, false positive and negative rates of key indicator reviews are calculated by comparing compliance data from comprehensive reviews to compliance results from key indicator reviews. To date, only Head Start (HSKI-C) and Georgia’s Core Rule Approaches have been validated. Additional research must be conducted to validate the approaches to differential monitoring and to determine other approaches that show merit.

Options for monitoring across ECE settings

1. Monitoring policies and procedures could be aligned across funding streams, and grounded in a universal set of health, safety, and performance standards that are research-based and endorsed by professional organizations.

Our ECE system is currently fragmented, offering a mixed bag of options to families with different levels of resources. Distinct funding sources each have different purposes that have created competing demands for accountability. For infants, toddlers, young children, and their families nested between and within these systems, it has been difficult to discern whether minimum standards—let alone higher levels of quality—are being met. To ensure that there is a minimum floor of health and safety, especially for children and families using subsidized care, greater continuity across programs and funding streams is needed.

As stated earlier, Caring for Our Children Basics, a companion resource to the third edition of Caring for our Children, was released for public comment in 2014 and will provide voluntary guidance to state regulatory agencies on the minimum health and safety standards necessary in all ECE settings. These standards are aligned with both HS/EHS performance standards and OCC guidance to states about providers who meet the minimum recommended standards for serving children and families who are eligible for subsidies. In addition, Basics references common health and safety standards across other federal programs, including the Centers for Disease Control and Prevention (CDC) Advisory Committee on Immunization Practices/American Academy of Pediatrics/American Academy of Family Physicians-approved guidelines on immunizations, the U.S. Department of Health and Human Services, Centers for Disease Control and Prevention (2012) Recommended Immunization Schedule for Persons Aged 0 Through 18 Years—United States, 2012. http://www.cdc.gov/vaccines/schedules/downloads/child/0-18yrs-11x17-fold-pr.pdf

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Agriculture’s (USDA) Child and Adult Care Food Program (CACFP) regulations,86 and the Consumer Product Safety Commission guidelines for playground safety.87 Incorporating research-based, interdisciplinary standards and recommendations in state regulations is intended to reduce the burden on programs, and increase the likelihood that children will be served in settings that are safe and conducive to their learning.

In the examples from states, it is clear that ECE providers are subject to multiple inspections every year under parallel—but not yet aligned—systems. A more unified ECE system built on core early learning and performance standards that are applicable to different kinds of providers is needed. States should use common administrative and monitoring protocols regardless of funding streams. Some of the RTT—ELC states that have been required to revise current or design new QRIS have started implementing a more aligned system. Co-locating and cross-training state regulatory, quality improvement, Pre-K, and HS/EHS staff who could have been originally housed in different human services and education agencies is one promising approach.

At a minimum, ensuring that representative stakeholders from across agencies of early learning are all involved in ECE system reform is essential. States that have been attempting to build a QRIS that includes all ECE sectors of HS/EHS, Pre-K, special education and child care, have faced difficulties accessing federal monitoring data that corresponds with minimum quality thresholds, for example from ECE environmental ratings or ratings of teacher-child interactions. It will be important to build the data infrastructure and communications systems to share monitoring information across federal and state settings. Under uniform standards developed and implemented across regulatory agencies, national credentialing organizations, and the agencies that manage federal and state grants to ECE providers, basic health and safety compliance will be addressed in such a way that allows accountability systems to focus on higher levels of quality linked to child and family outcomes.

2. After further validation by the research community, systems of differential monitoring could be piloted and implemented to help states target technical assistance and monitoring resources to the ECE providers who are at the greatest risk for providing unsafe learning environments.

Many states are using differential monitoring to make monitoring more efficient. As opposed to “one size fits all” systems of monitoring, differential monitoring determines the frequency and depth of needed monitoring from an assessment of the provider’s history of compliance with standards and regulations. Providers who maintain strong records of compliance are inspected less frequently, while providers with a history of non-compliance may be subject to more announced and unannounced inspections. In some states, more

frequent inspections are conducted for providers who are on a corrective action plan, or after a particularly egregious violation.

Differential monitoring, however, should not replace routine inspection of all licensed providers. A study of Vermont’s differential licensing system demonstrates that although it can be effective to inspect centers with a poorer compliance record more frequently, centers with a good compliance record also need routine inspection or risk deteriorating compliance. It is also important to put in place precautions that will prevent providers from anticipating abbreviated or more focused monitoring reviews.

At a minimum, all early care and education providers could receive a comprehensive inspection to determine the baseline level of compliance with standards and regulations. In addition, the National Association for Regulatory Administration (NARA) recommends that “routine monitoring inspections occur with sufficient frequency to protect consumers and to prevent or reduce compliance deterioration—at least twice-yearly— unless the agency has a reliable system to reduce the frequency of routine monitoring for stable, high-compliance facilities, provided that all facilities are inspected at least once a year.”

A risk-based, or key indicator, approach to monitoring complements differential monitoring by allowing the monitoring agency to track key indicators of compliance, better target monitoring and technical assistance resources, and combat compliance deterioration. The HSKI Pilot Project provides an important model for how monitoring resources can be re-distributed to focus limited resources on the programs that are out of compliance in the most crucial areas for the protection of children, and several states are already designing and implementing this kind of approach.

A note of caution: Although differential monitoring models have been implemented in states, this research has not been submitted to the rigor of peer-review. It will be important to validate these efforts in the scientific community before differential monitoring practices are significantly expanded or further endorsed by states or federally.

3. Third party accreditation and credentialing by national organizations could be expanded. This strategy is widely used in analogous sectors.

Although 98 percent of military child care providers have attained national accreditation, only 10 percent of civilian ECE centers and 1 percent of family and group child care homes are accredited. Providers who embark on accreditation are often committed to more

89 NARA, 2009
stringent standards for class sizes, teacher: child ratios, staff qualifications and professional development, and salaries than state regulatory guidelines require. Providers who are nationally accredited publicize this achievement, and presumably, families recognize national accreditation as a mark of quality. Although research is limited in this area, it suggests that nationally accredited providers offer safer learning environments.

One way states and territories have created incentives to become nationally accredited is by offering ECE providers higher subsidy rates. Continuing to provide incentives to providers to commit to higher levels of quality takes some of the burden off state regulatory agencies, who are already struggling to meet the staff caseloads ratios of one child care consultant to 50 ECE providers that are recommended by the National Association for Regulatory Administration (NARA). National accreditation should also bear some relationship to QRIS in states. Toward this end, several states are consulting with NAEYC and other national accreditation organizations to determine how QRIS standards align with national accreditation standards.

4. **For ECE programs that are also federal grantees subject to monitoring, federal and state agencies could share any negative findings or instances of non-compliance.**

Many states developing QRIS that is meant to be inclusive of Head Start have had difficulty incorporating Head Start grantees in ways that will incentivize participation, rather than increase the burden on these grantees. It is clear that federally-administered Head Start monitoring occurs in ways that are often more rigorous than basic health and safety monitoring conducted by state regulatory agencies. In addition, the Office of Head Start has been experimenting with a research-based, differential monitoring approach since 2013. Although data from federal monitoring visits may eventually be made available to grantees for the purposes of quality improvement, it is currently neither shared with state licensing agencies, nor QRIS staff. Under these circumstances, participation in additional state quality improvement endeavors—such as QRIS—has the potential to add to an already extensive reporting burden for Head Start grantees. Similarly, the USDA’s Child and Adult Care Food Program (CACFP) conducts federal monitoring of many of the same programs that accept CCDF subsidies in states, but monitoring results are not shared with state administrators. Aligning monitoring protocols and results of monitoring visits across federal and state agencies will increase efficiency and decrease the time and effort of grantees. Notably, in the context of discussions about implementing the CCDBG Reauthorization, several states have already begun to convene interagency groups to map out staffing the enhanced monitoring requirements. These discussions have involved work on aligning inspection and training requirements across CCDF and the CACFP. On a federal level, the U.S. Department of Health and Human Services and the U.S. Department of Agriculture have also started collaborating in considering guidance to states about how to improve streamline standards and requirements across programs. Some of these discussions have

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91 NARA, 2009
focused on cross-training monitoring staff, and examining funding mechanisms to cross-train and cross-monitor.

5. **Federal and state agencies could partner to increase understanding among the community of providers that the larger purpose of monitoring is to keep children, families, and staff safe.**

Different federal and state agencies may have different purposes for monitoring. Examples of the intent of monitoring that were highlighted by different sources include monitoring for:

- Basic compliance with health and safety standards;
- A high standard of quality;
- Determining whether to close down an ECE program; and
- Determining whether an ECE program receives additional funding.

Considering the different purposes monitoring could serve, it may be difficult to come to an agreement on a more universal vision of monitoring across sectors and funding streams. However, federal and state agencies could begin the process of reaching consensus on the foundational components of monitoring that are meant to keep children, families, and staff safe. Once these basic elements are met, ECE programs could work with state and federal regulatory agencies on higher levels of quality that are associated with children’s readiness to learn.

**Current research on aligning monitoring across sectors**

The Administration of Children and Families (ACF) recently invested in a Child Care and Early Education Policy Research and Analysis (CCEEPRA) project that is being conducted by the research organization Child Trends. The project is focused on cross-sector monitoring issues in early care and education that:

- Supports a more unified early childhood system;
- Provides a foundation for cross-sector work in other areas, such as professional development;
- Reaches agreement on some basic elements of quality;
- Helps focus on some basic elements of quality;
- Minimizes inconsistencies across ECE sectors;
- Increases the efficiency in the early childhood system; and
- Reduces burden on early childhood programs.

Addressing these considerations, the Child Trends project will articulate the dimensions of a cross-sector monitoring system that will provide tools for state and federal agencies to think through the infrastructure necessary to institute such a system across funding streams. We hope that some of the foundational work in this white paper on state practice and the current federal system will inform work on cross-sector monitoring.
Conclusion

As demonstrated in this white paper, a range of entities monitor and regulate individual ECE programs in ways that are often duplicative and burdensome. Advancing the field in monitoring will likely occur in response to the reauthorization of the CCDBG Act. These recent legislative changes have been the result of advocacy, examination of best practices in states, recommendations of experts through the hearing process in the Senate and House, and bipartisan support. Any reform in monitoring should more effectively promote children’s health, safety, and optimal development. The current system operates under both inefficiencies and promising practices. Analogous sectors, such as child welfare and health care, offer some insights about how iterative the process of reforming monitoring systems can be, and how necessary it is to carefully gather feedback from stakeholders in and outside of government. We have learned that the right balance of federal and state engagement has been difficult to attain, and have highlighted the importance of activities to build the infrastructure necessary to support a data-driven monitoring system that has the potential of informing continuous quality improvement. We hope this white paper, and the upcoming research on alignment across ECE sectors, will provide states with some of the resources necessary to collaborate in building a cross-sector monitoring system that is centered on aligning federal and state programs, increasing efficiencies, reducing administrative burdens, targeting support to programs that require the greatest assistance, and ensuring all children in out-of-home care are safe and ready to learn.
CONTEMPORARY ISSUES IN LICENSING
Monitoring Strategies for Determining Compliance: Differential Monitoring, Risk Assessment, and Key Indicators

Introduction

While States’ licensing systems primary goal is to improve the health and safety of children in child care, important decisions must be made in order to also maximize administrative cost efficiencies. With limited resources, licensing administrators work to ensure that monitoring visits focus on what is most important in keeping children safe. In the absence of research that assesses the efficacy of various approaches, States are moving ahead with different methods to identify and reduce the risk of harm to children. Some strategies include:

- Identifying licensing rules where violations pose a greater risk to children;
- Assigning a weight to each rule to further distinguish levels of regulatory compliance;
- Focusing monitoring visits on key indicators from the rules that predict compliance and reduce risks;
- Increasing monitoring frequency for programs with low levels of compliance;
- Increasing monitoring depth for programs with low levels of compliance;
- Helping providers, parents, and licensing staff better understand the potential consequences of serious noncompliance;
- Identifying providers in need of technical assistance; and
- Using more sophisticated data systems to target case management and improve consistency in enforcement actions.

The purpose of this report is to describe various methods States are using to monitor child care facilities efficiently and effectively. It provides descriptions and examples of these methods and details of States’ practices.

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1 Because licensing of child care facilities most often occurs at the state level, there are variances in terminology from State to State. For the purposes of this report, the terms identified are defined as follows and are used interchangeably throughout: Regulations, Rules, Requirements, Policies and Administrative Code, Laws, Statutes.
Methodology

To support the Office of Child Care’s goal of children served in safe, healthy child care settings, the National Center on Child Care Quality Improvement (NCCCQI) contracted with a group of nationally-recognized consultants with expertise in administering and researching licensing systems to prepare a series of written reports about critical licensing issues.

The information provided in these reports was obtained by surveying and interviewing representatives of state licensing agencies in nine States: CT, FL, GA, NC, OH, OK, TX, UT, and WA. The States selected are not a representative sample but were chosen based on the consultants’ knowledge that they are implementing effective and innovative practices which may be helpful to other state licensing agencies. Additionally, an effort was made to achieve some degree of geographic representation through the States selected.

Licensing personnel from the nine States selected first completed a written survey instrument and then spoke with the consultants in a telephone interview. All individuals interviewed were licensing agency directors or top-level administrators.

Information from Research Brief #1: Trends in Child Care Center Licensing Regulations and Policies for 2011 (NCCCQI, 2013) and The 50-State Child Care Licensing Study: 2011-2013 Edition (National Association for Regulatory Administration [NARA], 2013) are also included to provide national data and context to the information gathered from the nine States. Both of these reports include data gleaned from a national survey of licensing agencies conducted by NARA. Responses to the NARA survey were received from licensing agencies in all 50 States and the District of Columbia.2

Methods for Monitoring for Compliance

In an effort to ensure the health and safety of children in child care facilities, States seek to identify and assess the risk of harm to children and increase monitoring in programs with lower levels of compliance. At the same time, state licensing agencies need to make the most efficient and effective use of available, and often shrinking, resources.

NARA, in Recommended Best Practices for Human Care Regulatory Agencies (2009), presents the characteristics of a strong licensing agency, including:

Maintains a research-based risk-assessment method whereby industry-wide and facility-specific risks, including both immediate and cumulative risks, are identified and prioritized; focuses inspections and technical assistance accordingly; and, applies the agency’s enforcement continuum systematically to avert or abate priority risks, to build consistent compliance, and to improve overall consumer protection across all relevant domains. (p. 6)

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2 In the NCCCQI and NARA reports, and in this report, the District of Columbia is included in state counts and not listed separately.
There are a variety of methods that many States are using, often in combination, in their monitoring and enforcement of licensing rules and regulations. This report explores these methods:

- **Differential Monitoring**: A regulatory method for determining the frequency or depth of monitoring based on an assessment of a facility’s history of compliance with rules;
- **Full and Abbreviated Compliance Reviews**: Conducting an inspection by monitoring all rules (full review) or a selected set of rules (abbreviated review);
- **Risk Assessment**: An approach that focuses on identifying and monitoring those rules that place children at greater risk of mortality or morbidity if violations or citations occur; and
- **Key Indicators**: An approach that focuses on identifying and monitoring those rules that statistically predict compliance with all the rules.

The relationship among these methodologies is often confused, partly because of varying definitions. The graphic below explains the relationship of the methodologies with differential monitoring as the overarching approach and risk assessment and key indicators as types of abbreviated compliance.
Differential Monitoring

Differential monitoring is a regulatory method for determining the frequency or depth of monitoring based on an assessment of a facility’s history of compliance with licensing rules. A differential monitoring system can be used to recognize a provider’s strong record of licensing compliance with abbreviated or less frequent inspections if there have been no serious violations for a period of time. For providers with rule violations and compliance issues, licensing agencies can use differential monitoring to focus more attention on those facilities with additional monitoring visits, targeting visits on the problem areas, and providing technical assistance. When inspections are focused on a subset of rules, States often have an option for licensing staff to conduct a full review when necessary.

In its analysis of licensing trends, NCCQI (2013) noted that more than 50 percent of States report having a method for determining the frequency or depth of monitoring based on an assessment of compliance with regulations. The number of States using differential monitoring increased significantly from 11 States in 2005 to 26 States in 2011.

Differential Monitoring Policies in Oklahoma

Oklahoma increases the number of monitoring visits from the required three annual visits if there is a pattern of noncompliance. Technical assistance is provided during all visits as needed. According to the Oklahoma Department of Human Services’ (2012) policies:

After each monitoring visit, licensing staff enter the monitoring frequency plan… [in] the licensing database. Any changes in the monitoring plan must be reviewed by the supervisor. Examples of the required number of visits include:

- One visit per year for inactive child care centers, part-day, or school-age facilities;
- Two visits per year for part-year programs;
- Three visits per year for facilities with a history of compliance;
- Six visits per year for applications, six-month permits, and changes in facility class except a large FCC home changing to a FCC home; and
- Twelve visits per year for seriously noncompliant facilities.

On occasions when licensing staff visit a facility between monitoring visits for purposes such as picking up paperwork, providing consultation on a specific issue, or verifying a required repair or purchase, a full monitoring visit is not required and the visit is not counted toward the required number of visits. If numerous, repeated or serious noncompliance is observed during the visit, a complete monitoring visit is conducted. If caseloads prevent licensing staff from conducting the required number of monitoring visits, the supervisor consults with the staff on case management, and the number of required visits may be reduced if approved by the regional program manager. This adjustment is approved and documented in the case record by the supervisor. Required visits to nonproblematic licensed facilities may be reduced by one visit per year for no longer than a one-year period. More information about 340:110-1-9. Case Management, Instructions to Staff, is available at http://www.okdhs.org/library/policy/oac340/110/01/0009000.htm.
**Full and Abbreviated Compliance Reviews**

States generally conduct full compliance reviews during monitoring visits where all possible areas of regulatory compliance are measured and every rule is checked for compliance. According to NARA (2013), States typically conduct a full compliance review of programs every 1 – 2 years, most often as part of the license renewal process.

A growing number of States are using an abbreviated compliance review to conduct at least some inspections. NCCCQI (2013) reported that more than 55 percent of States in 2011 were using abbreviated compliance reviews for some inspections, mostly during routine compliance reviews.

States have different approaches to deciding if and when to use an abbreviated compliance form. NARA (2013) reported that in 2011, most of the States that use abbreviated compliance forms had policies on when to switch from an abbreviated compliance review to a full compliance review. The following examples illustrate how States determine when to use full and abbreviated compliance reviews:

- **Florida** inspects centers a minimum of three times per year and family child care (FCC) homes two times per year. As part of the 1996 WAGES Act, the Florida Legislature directed the Department of Children and Families and local licensing agencies to develop and implement an abbreviated inspection plan for child care facilities based on certain statutory criteria. Florida has an automated child care inspection system that tracks violation data and identifies the providers eligible for abbreviated inspections. Eligible providers have had no Class I or Class II (most serious) violations for two consecutive years. If violations are found during an abbreviated visit, the provider is no longer eligible to be monitored using the shorter form and must have a full compliance review. Florida’s laws about conducting abbreviated inspections are available in 2013 Florida Statutes Sections 402.26 – 402.319 Child Care at [http://nrckids.org/default/assets/File/StateRegs/FL/FL_Statutes_402_26-402_319_Child_Care.pdf](http://nrckids.org/default/assets/File/StateRegs/FL/FL_Statutes_402_26-402_319_Child_Care.pdf).

- The **Georgia** licensing agency conducts a minimum of two visits per year, including a licensing study and a monitoring visit. The licensing study is a full inspection using an inspection form that includes all rules, with the core rules highlighted (see page 8 for more detail). Monitoring visits involve the use of an abbreviated form that only includes the core rules.

- **North Carolina**’s state statute requires that all providers are inspected by the licensing agency at least once per year, in addition to annual inspections by local or state health and fire inspection agencies. For programs to receive an abbreviated monitoring visit, they must have a four- or five-star license and a compliance score of 85 percent over the past 18 months prior to the scheduled visit date. In the rated license system, higher star levels are obtained by meeting additional requirements related to program quality standards and education levels of staff. “Chapter 110 Child Care Facilities,” in North Carolina General Statutes (2013) is available at [http://nrckids.org/default/assets/File/StateRegs/NC/07-13%20Article%2007.pdf](http://nrckids.org/default/assets/File/StateRegs/NC/07-13%20Article%2007.pdf).

- **Texas** inspectors and investigators determine which standards to evaluate prior to the inspection but have the ability to add standards during the inspection, if needed. All standards must be evaluated at least once every two years. Standards may be re-evaluated as a result of investigations, follow up on previous deficiencies, or as part of a corrective action. Texas policies on Preparing for Inspections are in Section 4140 in the Texas’ Licensing Policy and Procedures Handbook at [http://www.dfps.state.tx.us/handbooks/Licensing/Files/LPPH_pg_4000.asp#LPPH_4140](http://www.dfps.state.tx.us/handbooks/Licensing/Files/LPPH_pg_4000.asp#LPPH_4140).

- **Utah** inspects centers and FCC homes twice a year. All providers receive an abbreviated unannounced compliance review and a full announced compliance review annually. All of Utah’s announced (full) and unannounced (abbreviated) inspection checklists are available on its Web site at [http://health.utah.gov/licensing/centerinspectionchecklists.htm](http://health.utah.gov/licensing/centerinspectionchecklists.htm) (centers) and at [http://health.utah.gov/licensing/HomeInspectionChecklists.htm](http://health.utah.gov/licensing/HomeInspectionChecklists.htm) (FCC homes).
Approaches to Identifying Critical Rules

Often differential monitoring involves monitoring programs using a subset of the licensing rules to determine compliance. There are two methods that States have used to identify these critical rules:

- **Key Indicators**: An approach that focuses on identifying and monitoring those rules that statistically predict compliance with all the rules; and
- **Risk Assessment**: An approach that focuses on identifying and monitoring those rules that place children at greater risk of mortality or morbidity if violations or citations occur.

Focusing on specific rules, whether through a key indicator or risk assessment process or a combination of both, can assist the licensing agency to:

- Implement a differential monitoring policy;
- Guide case management such as targeted technical assistance or witnessed visits;
- Determine enforcement actions based on categories of violations; and
- Assist families in better understanding the potential impact of noncompliance on their child’s care.

**Key Indicators**

Here we describe the key indicator approach, where States identify those rules that statistically predict overall compliance. A methodology for key indicators was developed by Dr. Richard Fiene at Pennsylvania State University. Dr. Fiene (2014) states that “if a program is 100% in compliance with the Key Indicators, the program will also be in substantial to full compliance with all rules. The reverse is also true in that if a program is not 100% in compliance with the Key Indicators, the program will also have other areas of non-compliance with all the rules.” (p. 3)

The indicator methodology was based on research to study the impact of child care quality on children’s development and the relationship between program quality and compliance with state licensing rules (Fiene, 2013). Several conducted in Pennsylvania in the 1980s found that programs in substantial compliance with licensing rules had better quality than those with 100% compliance (with a focus on recordkeeping), which led to including more program items in licensing rules. The studies supported greater use of indicators to save monitoring time and permit more technical assistance and consultation on quality improvement (Fiene, 1986, Kontos & Fiene, 1987).

The key indicators approach is often used to determine the rules to include in an abbreviated inspection form or checklist. Some States have worked with Dr. Fiene to implement his statistical methodology; however, other States have determined indicators by reviewing their rules and choosing by consensus those considered most critical to protecting children’s health and safety. In addition, States that use key indicators often include a few additional rules in their inspections, based on level of risk or random selection.
**Washington Employs Key Indicator System**

*Washington* based its system of monitoring checklists on the thirteen indicators developed by Dr. Richard Fiene (2002) for the U.S. Department of Health and Human Services a number of years ago. These are used across all types of programs—centers, FCC homes, and school-age programs. Providers with nonexpiring full licenses are monitored using an abbreviated checklist when the site has demonstrated a high level of compliance since the prior visit. This includes, but is not limited to, no valid complaints, compliance agreements, or other information demonstrating noncompliance with licensing rules. Licensors are required by policy to move to a full checklist in cases where providers are not in compliance with any of the key indicators. *Washington* has started to use electronic licensing forms and data gathering that will allow for statistical weighting in future years, after the data have matured. *Washington’s* licensing agency includes some rules in addition to the key indicators in their abbreviated checklists.

- **Policies and Procedures**

- **Monitoring Tools**

**Risk Assessment**

A risk assessment approach can be used to determine the rules that pose a *greater risk of harm to children* if violated. Risk assessment is most often tied to classifying or categorizing rule violations and can be used to identify rules where violations pose a greater risk to children, distinguish levels of regulatory compliance, or determine enforcement actions based on categories of violations.

There are a number of ways licensing regulations can be assessed for risk, including the following:

- Probability of harm (high, medium, low);
- Severity of harm (extreme, serious, moderate, low); or
- Frequency of violation (numerous, repeated) based on those considered most critical to protecting children’s health and safety.

States that choose a risk assessment approach must determine whether to assign a risk category to all rules or a selected set of rules. A risk category might be assigned to all rules so that enforcement can be tied to level of risk. For example, *Florida* has categorized all rule violations based on the threat of harm to children:
“Class I Violations” are the most serious in nature, pose an imminent threat to a child including abuse or neglect, and could or do result in death or serious harm to the health, safety, or well-being of a child;

“Class II Violations” are less serious in nature than Class I violations, and could be anticipated to pose a threat to the health, safety, or well-being of a child, although the threat is not imminent; and

“Class III Violations” are less serious in nature than either Class I or Class II violations, and pose a low potential for harm to children.

Alternatively, a licensing agency might only assign a risk category to a subset of rules if the primary purpose of risk assessment is to determine the need for further monitoring visits. Ohio has defined Serious Risk Noncompliances (SRNC) for centers and group child care homes based on requirements with the highest risk of harm if violated. Regulations are organized into three large categories: 1) Lack of Supervision, 2) Administrative Negligence, and 3) Environmental Hazards. If a program has a certain number of serious risk violations, they receive additional full compliance inspections. A summary document of the requirements chosen as SRNC is available at http://jfs.ohio.gov/cdc/RiskRules.pdf.

Oklahoma has also identified serious noncompliances that expose children to conditions that present an imminent risk of harm. Their policies clarify that “Imminent risk of harm must be assessed based on the age of the child, the amount of time the caregiver was out of compliance, and the caregiver’s efforts to mitigate the risk. Serious noncompliances are identified through licensing observations, confirmed complaint investigations, and/or self-reported incidences.” The policies are available at http://www.okdhs.org/library/policy/oac340/110/01/0009003.htm.

Some States use risk assessment to classify violations and determine enforcement approaches. For example, in Florida, violations of the minimum health and safety standards are automatically classified as Class I, Class II, or Class III based on the potential for harm to a child. Enforcement actions, such as monetary fines, are determined by the classification of violations and number of occurrences in a progressive enforcement model. Licensing inspection reports are posted on the Florida Department for Children and Families Web site and include violation classifications. The definitions of the three classes are found in “Chapter 65C-22 Child Care Standards” of the Florida Administrative Code (8/1/2013) at http://nrckids.org/default/assets/File/StateRegs/FL/FL_Chapter_65C-22.pdf.

In Utah, rule violations are classified as Level 1, 2, or 3 violations, depending on both the seriousness of harm to a child that could result from the violation, as well as the likelihood that harm will occur. Level 1 findings are categorized as “cited” findings the first time they occur. Level 2 and 3 findings are initially classified as “technical assistance” findings, which mean that providers are given technical assistance and the opportunity to correct the violation. The number of rule violations and the severity of the violations determine if providers may be placed on a conditional license with additional monitoring inspections. The frequency of monitoring inspections may also increase due to noncompliance during the conditional period. Definitions of the violation levels are available in the “Introduction” section of the Child Care Center Rule Interpretation Manual at http://health.utah.gov/licensing/rules/Interpretation/Center/Section%201-%20Introduction.pdf. Utah’s interpretation manuals include noncompliance levels for each licensing requirement. The manuals are available at http://health.utah.gov/licensing/rules.htm.
Texas’ Weighted Standards Based on Risk

In Texas, all of the Child Care Licensing Minimum Standards have been assigned a weight (High, Medium High, Medium, Medium Low, or Low) based on the risk that a violation of that standard presents to children. Weights are noted within the minimum standards documents in the left margin next to each standard or subsection. Only those standards that can be violated (marked as a deficiency) are weighted. The weighted enforcement system utilizes the program’s operations compliance history including the repetition of violations, investigations, types, and number and weight of deficiencies to generate the enforcement recommendations. The Texas licensing standards are available at [http://nrckids.org/index.cfm/resources/state-licensing-and-regulation-information/texas-regulations/](http://nrckids.org/index.cfm/resources/state-licensing-and-regulation-information/texas-regulations/).

In Texas, inspectors and investigators determine which standards to evaluate prior to the inspection but have the ability to add standards during the inspection, if needed. All standards must be evaluated at least once every two years. Standards may be re-evaluated as a result of investigations, follow up on previous deficiencies, or as part of a corrective action. The weighted enforcement system utilizes the operations compliance history, including the repetition of violations, investigations, types, and number and weight of deficiencies to generate the enforcement recommendations.

Licensing staff document observations to capture the scope and severity of the deficiency, but the weighted standards are now part of the licensing database and decisionmaking process, resulting in more consistent and equitable enforcement practices. The Child Care Licensing Automation Support System (CLASS)* Risk Review is a tool that supplements the professional assessments of licensing staff. The CLASS Risk Review produces enforcement recommendations based upon the type, number, weight, and repetition of violations over the course of an operation’s two-year compliance history. A Risk Analysis summary can be requested by staff seeking feedback on corrective actions. Facilities with serious deficiencies or a significant number of deficiencies, repeat deficiencies, or that fail to make timely corrections, are inspected more frequently to monitor the level of risk to children.

For more information, see “Section 4500: Evaluating Risk to Children” in the Texas Licensing Policy and Procedures Handbook at [http://www.dfps.state.tx.us/handbooks/Licensing/Files/LPPH_pg_4300.asp#LPPH_4500](http://www.dfps.state.tx.us/handbooks/Licensing/Files/LPPH_pg_4300.asp#LPPH_4500).

*CLASS is the Child Care Licensing Automation Support System. It is a computer application used by Texas licensing staff for record management.
## Georgia’s Core Rules

Georgia uses a core rule reference chart to determine and assess the health and safety risk of noncompliance to children. When child care licensing consultants conduct inspections, they use the chart to assess the level of severity of the violation and guide their decisionmaking on issuing citations. Each time any core rule within the core rule categories is cited, the risk level of the citation is also assessed. Risk level is assigned at low, medium, high, and extreme levels. The number of core rule categories cited and the assigned risk level determines the annual compliance level. A facility’s annual compliance status is determined on June 30 of each year, based on the performance for the past fiscal year (July 1-June 30), is posted on the public Web site, and remains in place for the next fiscal year. Additional information about Georgia’s core rules is available at [http://decal.ga.gov/ChildCareServices/CoreRulesInformation.aspx](http://decal.ga.gov/ChildCareServices/CoreRulesInformation.aspx).

### Family Day Care Home Rule Categories
- Criminal Records Check
- Discipline
- Field Trips
- Infant Sleeping Safety Requirements
- Overcrowding Registration Requirements
- Physical Plant
- Playgrounds
- Staff:Child Ratios
- Supervision
- Swimming Pools and Water Related Activities

### Child Care Learning Center and Group Day Care Home Core Rule Categories
- Diapering Areas and Practices
- Discipline
- Field Trips
- Infant Sleeping Safety Requirements
- Hygiene
- Medications
- Physical Plant
- Playgrounds
- Staff:Child Ratios
- Supervision
- Swimming Pools and Water Related Activities
- Transportation

## Issues To Consider

The goal of differential monitoring, abbreviated compliance tools, risk assessment and key indicators is to create efficiencies and greater effectiveness in monitoring and enforcement, permitting more time for monitoring, especially of those facilities with lower compliance that need more technical assistance and program consultation. It should be noted, however, that these strategies should only be implemented when built on a strong licensing structure with a foundation of adequate periodic unannounced inspections. The States surveyed for this report use different tools and methodologies for measuring compliance, and feel that this practice has increased their enforcement capability. The increased use of these methodologies across States raises some questions for the field to consider:

- While abbreviated compliance forms are widely used, most are not developed using a methodology that statistically predicts compliance. Are all of these methods equally effective in measuring the level of compliance with licensing rules?
- Are all abbreviated compliance systems successful in creating both efficient and effective use of resources? What are the similarities and differences and what is their impact on effective regulation?
- What is the best mix of the measurement methodologies discussed in this report for consistent and strong enforcement of the licensing rules?
How do these methods impact the relationship between licensing and other entities that monitor child care programs, such as Head Start, Quality Rating and Improvement Systems, prekindergarten, and national accreditation?

States must continue to educate providers on the importance of meeting all licensing rules, not only those that are identified as being critical to children’s health and safety. Licensing staff should receive training and guidance on remaining diligent during all on-site inspections, and carefully observing and assessing all facets of the physical facility and program including interaction between staff and children. Licensing policy and procedures should also guide staff on what factors will trigger a full compliance review at any inspection using an abbreviated tool. Lastly, research is needed to compare the various forms of abbreviated compliance systems for their effectiveness in measuring compliance levels and fostering improved compliance and quality.

References


13 INDICATORS OF QUALITY CHILD CARE: RESEARCH UPDATE

04/01/2002

Presented to: Office of the Assistant Secretary for Planning and Evaluation and Health Resources and Services Administration/Maternal and Child Health Bureau U.S. Department of Health and Human Services

Presented by: Richard Fiene, Ph.D. Pennsylvania State University National Resource Center for Health and Safety in Child Care, University of Colorado

2002

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OVERVIEW

The purpose of this research brief is to provide guidance for state child care agencies as they think about revising their state child care regulations. The brief is based upon a synthesis of literature around the health and safety standards for out-of-home child care found in *Stepping Stones to Using Caring for Our Children*, using 13 predictor/indicator topics to provide focus. The brief examines evidence that exists to support how these standards protect children from harm. The audiences for this research brief are state administrators and policymakers, child care providers, and early childhood researchers. It combines two licensing measurement methodologies (Fiene & Kroh, 2000): 1) Licensing weighting and 2) indicator systems. Licensing weighting and indicator systems are two licensing measurement tools that have been utilized in the licensing literature for the past 20 years. These two methodologies are part of the *Licensing Curriculum* developed by the National Association for Regulatory Administration. These methodologies constitute the most researched tools for conducting inferential inspections by licensing agencies.

The National Resource Center for Health and Safety in Child Care utilized the two licensing measurement methodologies to develop a user-friendly, shortened assistance tool based upon *Caring for Our Children: National Health and Safety Performance Standards for Out-of-Home Child Care*, a comprehensive standards document containing over 900 standards. The shortened assistance tool, *Stepping Stones to Using Caring for Our Children*, is a statistically determined version of *Caring for Our Children*, based upon the most critical standards to protect children from harm in out-of-home child care. Employing the indicator system methodology, this research brief builds upon *Stepping Stones* by focusing on those standards that protect children from harm in child care. These standards are also key predictors regarding children’s positive outcomes while in child care and are statistical indicators of overall compliance with child care regulations. The indicators in this brief contain a reduced number of standards from those presented in *Stepping Stones*. These standards have gone through a weighting consensus based on risk factors as well as an indicator methodology that selects standards on the basis of being able to predict overall compliance with standards and positive outcomes for children. As state regulations are rewritten, this brief will constitute a major step forward in support of state child care agencies as they attempt to ascertain which standards are the keys to protecting children.

This research brief is the final product of a lengthy process that started in 1979, when the Federal Interagency Day Care Requirements (FIDCR) were being drafted and the Department of Health, Education and Welfare (HEW) was looking for a streamlined tool for conducting monitoring reviews. The weighted licensing indicator system was just being developed in Pennsylvania (Fiene & Nixon, 1981) and this new methodology looked like a potential solution for the FIDCR standards. Although the FIDCR standards went through several drafts, the standards were never finished and implemented. However, the interest of HEW (became the Department of Health and Human Services (HHS) in
1980) in the weighted licensing indicator system methodology never wavered. A federal demonstration grant was given to Pennsylvania to further develop this methodology and begin pilot testing it in a consortium of states from 1980-1985 (Fiene, 1988). After 1980 it became clear that the monitoring focus for child care programs was shifting from the federal government to the states. HHS wanted to assist states in their monitoring efforts and felt that the weighted licensing indicator system was an innovative means for doing this.

During 1980s and early 1990s, many states utilized this methodology to help streamline their licensing enforcement systems. In 1994, a study from the U.S. General Accounting Office (GAO) estimated that 30 states were using the methodology in one form or another. The methodology has been used in child care and in other human services areas as well, including: mental health, early intervention, child welfare, and youth services (Fiene, 1988). During this time, a national data base was established at the Pennsylvania State University in order to track the various state regulations that constituted respective states weighted licensing indicator systems. The remarkable aspect of this data collection effort and data base was that a core set of indicators began to appear. Although the wording was not exact from state to state, every state had the same indicators appearing on their indicator checklists in some fashion. Thirteen key indicators consistently appeared. The 13 indicators were the following: child abuse reporting and clearances, proper immunizations, staff child ratio and group size, director and teacher qualifications, staff training, supervision/discipline, fire drills, administration of medication, emergency plan/contact, outdoor playground safety, inaccessibility of toxic substances, and hand washing/diapering.

From the early 1990s, the methodology began to gain the attention of national organizations that were interested in utilizing it outside of the licensing domain. For example, the National Child Care Association was interested in using it for their newly developing accreditation system (Fiene, 1992). In 1994, the Maternal and Child Health Bureau and the National Resource Center for Health and Safety in Child Care became interested in exploring a means for targeting certain standards in Caring for Our Children based upon the methodology. Stepping Stones is the product of that endeavor. However, only the weighting consensus portion of the methodology was utilized in the development of Stepping Stones. This research brief completes that process by incorporating the key indicator portion of the methodology.

This research brief updates reviews of recent research that is related to the 13 indicators that form the basis of the national database maintained at the Pennsylvania State University. It also lists the standards from Caring for Our Children that correspond to the 13 indicators. In many of the indicators, several standards are listed because the indicator was represented by different wording or emphases in the various state regulations. Therefore, when the comparison between the Caring for Our Children standards and the national data base of the state child care regulations was completed, many variations on each specific indicator were included.

The research brief then summarizes the research that has been completed in the 1990s and identifies gaps where additional research is needed. Following that, a summary table gives additional detail in an annotated bibliographic fashion on key studies that demonstrate the importance of the particular indicator. This research base and review clearly documents the importance of the 13 indicators when determining the health and safety of young children in child care and the overall quality of a program.

These key indicators support and embrace the overall research literature related to child care quality. Many of the indicators have been identified as key surrogates of child care quality that have an impact on young children and as being a reliable tool for identifying high compliant versus low compliant programs. The research literature over the past 20 years has demonstrated that these indicators accomplish two things. One, they statistically predict overall compliance with regulations in particular states. And two, a significant relationship exists between compliance with these indicators and positive outcomes for young children (Fiene, 1994).
INTRODUCTION

The Office of the Assistant Secretary for Planning and Evaluation and the Bureau of Maternal and Child Health in the U.S. Department of Health and Human Services have commissioned this research brief through an interagency agreement; it was developed from a comprehensive literature search conducted by the National Resource Center for Health and Safety in Child Care.

The purpose of this research brief is to review and to provide an analysis of the research literature focused on 13 key licensing indicators of quality in child care. These 13 indicators were used in the development of *Stepping Stones to Using Caring for Our Children* (1997). *Stepping Stones* is a publication developed from the National Health and Safety Performance Standards: Guidelines for Out-of-Home Child Care Programs [Caring for Our Children(CFOC)] to identify those standards most needed for the prevention of injury, morbidity, and mortality in child care settings. The National Resource Center developed *Stepping Stones* and is currently revising the National Health and Safety Performance Standards.

The 13 key licensing indicators, empirically identified in the research literature (Fiene & Nixon, 1981, 1983; Fiene, 1988; Fiene, 1994), have been part of a generic child care regulatory database for the past two decades. This database has been used by many states in the development of their respective licensing indicator systems.

This research brief will highlight the latest pertinent research studies related to the 13 indicators that have been completed since the publication of the National Health and Safety Standards in 1992. The research brief will also focus on gaps in the research literature where additional empirical research needs to occur. In some cases, research going back further than the last decade was used because of the classic nature of the studies and their significance to the 13 key indicators. The 13 indicators are the following: child abuse reporting and clearances, proper immunizations, staff:child ratio and group size, director and teacher qualifications (two indicators), staff training, supervision/discipline, fire drills, administration of medication, emergency contact/plan, outdoor playground safety, inaccessibility of toxic substances, and handwashing/diapering. The order in which the indicators are reviewed in this research brief is arbitrary and does not reflect the degree of risk associated with an indicator.

This research brief is organized by indicator, followed by each related standard from Caring for Our Children. Next, the latest empirically-based research that demonstrates the importance of the indicator and any noted gaps in the research literature are listed. Finally, a summary table that lists pertinent research citations related to each indicator is included. When fewer research citations were available, the summary table of research selections mirrors the research cited in the review section. When many research selections were available, the summary table and the research review sections are very different due to the large number of research citations. A conclusion summarizing the results of this research brief concludes the document.

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CHILD ABUSE INDICATOR

The following list of standards based upon Caring for Our Children (CFOC) are taken from the National Data Base of Key Weighted Licensing Indicators that is maintained at the Pennsylvania State University. This national data base maintains all the state licensing regulations that fall under this particular indicator. State regulations are sometimes worded a bit differently or emphasize different aspects of this indicator. Therefore, in comparing the national data base...
of state regulations with CFOC standards, several different standards are selected for inclusion under this particular indicator. Twelve standards from CFOC were selected because states measure the child abuse indicator in 12 different ways.

**CARING FOR OUR CHILDREN (CFOC) STANDARDS (1992):**

HP 094: The facility shall report to the department of social services, child protective services, or police any instance where there is reasonable cause to believe that child abuse, neglect, or exploitation may have occurred.

HP 095: Caregivers and health professionals shall establish linkages with physicians, child psychiatrists, nurses, nurse practitioners, physicians' assistants, and child protective services who are willing to provide them with consultation about suspicious injuries or other circumstances that may indicate abuse or neglect. The names of these consultants shall be available for inspection.

HP 096: Caregivers must be aware of the common behaviors shown by abused children and, if many such children are in the center, make special provisions for them by the addition of staff.

HP 097: Caregivers who report abuse in the settings where they work shall be immune from discharge, retaliation, or other disciplinary action for that reason alone, unless it is proven that the report was malicious.

HP 098: Employees and volunteers in centers shall receive an instruction sheet about child abuse reporting that contains a summary of the state child abuse reporting statute and a statement that they will not be discharged solely because they have made a child abuse report.

HP 099: All caregivers in all settings and at all levels of employment shall know the definitions of the four forms of child abuse and shall be able to give examples. They shall know the child abuse reporting requirements as they apply to themselves, and how to make a report.

HP 100: Caregivers with a year of experience in child care, and all small family home caregivers, shall know the symptoms and indicators of abuse that abused children may show. They shall know the common factors, both chronic and situational, that lead to abuse, and some ways of helping persons who are prone to abuse to avoid committing abuse. These symptoms and indicators shall be listed in the written policies.

HP 101: Center directors shall know methods for reducing the risks of child abuse. They shall know how to recognize common symptoms and signs of child abuse.

HP 102: Caregivers shall have ways of taking breaks and finding relief at times of high stress (e.g., they shall be allowed 15 minutes of break time every four hours, in addition to a lunch break of at least 30 minutes).

HP 103: The physical layout of facilities shall be arranged so that all areas can be viewed by at least one other adult in addition to the caregiver at all times to reduce the likelihood of isolation or privacy for individual caregivers with children, especially in areas where children may be undressed or have their genitals exposed.

HP 104: Caregivers shall be knowledgeable about the symptoms and signs caused by sexually transmitted diseases (STDs) in children. They must refer such children for care by calling the health care provider as well as the parent in order to be certain that the child is taken for care. They must determine from the health care provider when the child may return to the site and what precautions, if any, are needed to protect other children. Caregiver training on these items shall be documented.
ST 034: Directors and large family home caregivers shall check references and examine employment history before employing any staff, including substitutes, who will be alone with a child or a group of children in child care.

RESEARCH REVIEW/GAP ANALYSIS:

A major concern of parents when they drop their children off at child care is the safety of their children in the hands of the caregivers. The abuse of children in out-of-home settings has generated a good deal of concern. However, all documented research in this area indicates that fewer instances of abuse occur in child care programs than in homes or residential facilities (Finkelhor & Williams, 1990; Goldman, 1993; Margolin, 1991). If abuse does occur, though, parents must be aware of several signs that are cause for concern. According to research, physical abuse most frequently occurs in the form of excessive discipline, often as a response to prior conflict with the child. Sometimes, excessive discipline may have been inadvertently supported by parental permission for corporal punishment. Although sexual abuse occurs less frequently in centers than in homes, the effects of sexual abuse on the child seems worse in centers. Sexual abuse often involves physical abuse (Schumacher & Carlson, 1999).

Several things that a program can do to foster an effective and harm-free child care experience include increased caregiver support (high staff-child ratios, sufficient breaks, etc.), a model of care, a focus on positive behavior, a consumer orientation, training opportunities, program evaluation, and an internal program audit (Daly & Dowd, 1992). Any effective staff development program incorporates these elements. When the staff is fully supported with these elements, the risk for abusive behavior decreases substantially. Research (Reyome, 1995) has also shown that satisfaction in the role of child care worker is inversely related to abusive attitudes. However, overall competence and feelings of efficacy in the role of child care worker are not significantly related to abusive attitudes.

Other research (Thompson, Laible, & Robbennolt, 1997) indicates that child maltreatment might be prevented through child care programs that offer social support, parent networking, child-rearing advice, and informal counseling to troubled parents. This idea is attractive in the abstract, but it is often difficult to implement. The Thompson et al. study examines the nature of social support and its efficacy in preventing child abuse and neglect, the characteristics and needs of abuse-prone parents, the roles of child care providers, and the institutional and economic conditions that can make child care programs uniquely valuable but challenging settings for assisting families at risk.

Another area that should be addressed is the caregivers ability to recognize abuse when it has occurred. Research (Wurtele & Schmitt, 1992) indicates that child care personnel know significantly less about the procedures for reporting suspected abuse and their protection under the law when compared to child sexual abuse experts. While child care staff are potential resources for abused children, they may fail to report suspected abuse if they do not know their legal responsibilities and their rights and protections under the law. These researchers have made suggestions for improving child care workers knowledge about reporting suspected sexual abuse cases. A basic educational program clearly delineating the legal responsibilities of staff, including requirements for reporting, is needed.

Linking nurses with child care programs seems to be a viable alternative (Mondor & Wray, 1994). Such an innovative program was implemented in Edmonton, Alberta, Canada, in which a health program focusing on child abuse and neglect was linked with local child care programs. This program grew out of a study done by OMara and Chambers in which 53 percent of child care operators felt they needed more information on child abuse and how to detect potential abuse related to children in their care.

User manuals can also be excellent training tools. One user manual of particular note was developed by the National Center on Child Abuse and Neglect, titled Caregivers of Young Children: Preventing and Responding to Child Maltreatment. Another good user manual is the Arkansas Healthy Children Handbook (1998), which has an excellent section on Child Maltreatment. The American Camping Association has an excellent guide, For Their Sake:
Recognizing, Responding to, and Reporting Child Abuse (1992). Additionally, a Teaching Strategies text called Caring for Infants and Toddlers: A Supervised, Self-Instructional Training Program (Volume I) (1991) has an exceptional chapter that recognizes child abuse and neglect. All of these handbooks, texts, and manuals are useful tools to be used for training child care staff on what to look for and how to report suspected child abuse and neglect. These tools also provide directors of child care programs with helpful information on designing a prevention program at their child care centers.

The community context in which child abuse and neglect takes place may influence both reporting and outcomes of investigations into such incidents (Craft & Staudt, 1991). The general purpose of the Craft & Staudt (1991) study was to determine if two types of communities (rural and urban) would present differences in the reporting and substantiating of possible child neglect situations. For example, although where one lives (rural or urban) does not significantly influence the projected likelihood of a situation being reported as neglect; considerable agreement exists between urban and rural respondents on what should be reported as neglect. Even so, workers in both communities did not agree about what would be substantiated in those communities. To further clarify this issue, Groeneveld and Giovannoni (1977) found that if a complaint was reported by a professional source it was more likely to be substantiated than if reported by a relative or neighbor.

SUMMARY TABLE:


Summary: Interviews were conducted with 982 mothers of young children to assess factors related to childrens risk of abuse and neglect by non parents temporarily responsible for child care. The target populations consisted of mothers who had given birth to at least one child during the previous six years (May 1984 through April 1990). Mothers were identified through certificates of live births located in the courthouse of a Midwestern county. Equal numbers of mothers were randomly selected from each month of the survey years. One hundred twenty-five mothers (13% of those surveyed) said that one or more of their children had been harmed or neglected by a nonparental caregiver. The strongest correlates of child abuse were caregiver gender and age. Although males were responsible for only 6.1% of non parental child care, they committed 40% of the child abuse. Adolescents performed 8.5% of non parental child care but committed 44% of the child abuse. Children were significantly less likely to be abused in a day care center or preschool than in home-based child care. The strongest correlates of neglect were the childs age, the caregivers age, and the child care setting. Babies under the age of one year were three times more likely to be neglected, adolescent caregivers were twice as likely to be neglectful, and as was true of child abuse, home-based care was the setting with the greatest risk.

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Citation: Bybee & Mowbray (1993), An analysis of allegations of sexual abuse in a multi-victim day care center case, Child Abuse and Neglect, 17(6):767-83.

Summary: This study applied criteria from Statement Validity Analysis (SVA) protocols to aggregate record review data of alleged sexual abuse of over 100 children in a day care center. The use of SVA criteria supported the veritability of allegations in this case, with the data analysis reflecting consistency, logical structure, and spontaneity of allegations.

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Citation: Wurtele & Schmitt (1992), Child care workers knowledge about reporting suspected child sexual abuse, *Child Abuse & Neglect*, 16(3):385-90.

Summary: As reports of the sexual abuse of preschool aged children increase and the number of children in day care expands, it is important to recognize child care workers as potentially important resource persons for sexually abused preschoolers. Although they are potential resources for abused children, they may fail to report suspected abuse if they do not know their legal responsibilities and their rights and protections under the law. The purpose of this study was to determine child care workers knowledge about their reporting rights and responsibilities. Relative to child sexual abuse experts, day care personnel knew significantly less about the procedures for reporting suspected abuse and their protection under the law. Suggestions for improving child care workers knowledge about reporting suspected sexual abuse cases are provided.

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Citation: Bassoff & Willis (1991), Requiring formal training in preventive health practices for child day care providers, *Public Health Reports*, 106(5):523-9.

Summary: The study was a test of the feasibility of mandating training in preventive health practices for child day care providers in California. Three approaches were taken to determining the feasibility of mandatory training. They were (a) to identify persons and groups with the capability to provide training, (b) to identify systems and networks for communication and collaboration on health issues related to day care at the local level, and (c) to determine the child day care providers concerns, needs, and future interests regarding child health. Information was collected on relevant courses offered by universities, colleges, and adult education programs; on training offered by child health authorities; and on formal curriculums offered by local and national sources. Day care center and family day care home providers were surveyed to determine their knowledge of child health issues, their concerns, and their future needs. The providers surveyed cared for a total of 14,340 children. Information on local networks was obtained from the surveys, from interviews, and from a special task force that had been set up to advise the State legislature. Study results supported the conclusion that a coordinated system of State-wide training was feasible, given the existing networks of training and educational resources, the number of day care providers who had already been motivated to seek some training in child health practices, and the almost unanimous interest among day care providers in obtaining training. Mandatory training in child health for day care providers will require a commitment in the form of new legislation outlining basic requirements and allocating funding. The implementation and costs of such a mandate at the State and local level are discussed.

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Citation: Craft & Staudt (1991), Reporting and founding of child neglect in urban and rural communities, *Child Welfare*, 70(3):359-70.

Summary: The community context in which child abuse and neglect takes place may influence both reporting and outcomes of investigations into such incidents. This study examines and contrasts urban versus rural community perceptions of neglect by lay citizens and protective service workers.

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Citation: Cohen (1998), Bettering your odds of not getting sued, *Child Care Information Exchange*, 123, 74-78.
Summary: Reviews five serious issues that can result in lawsuits against child care centers and suggests ways directors can make them less likely. Discusses suits resulting from: injuries to a child; sexual abuse of a child; contractual matters with parents; wrongful termination of employees; and failing to care for a child with special health needs.

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Summary: Draws attention to the prevalence of child abuse in homes, and discusses the extent of the problem its definition and its physical, behavioral, and environmental indicators. Discusses the child care workers role in knowing how to report the crime, teaching a child how to prevent it, and combating it by being informed and aware personnel.

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Summary: Discusses specific elements that can foster effective and abuse free out of home care, increase program effectiveness, and reduce negative outcomes such as staff burnout. Elements include caregiver support, a model of care, a focus on positive behavior, a consumer orientation, training, program evaluation, and an internal program audit.

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Summary: Day care workers must be able to recognize and respond to the telltale signs of child abuse and neglect. They also need a sound understanding of the services available to these children and their families. Nurses can help.

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Citation: Schumacher & Carlson (1999), Variables and risk factors associated with child abuse in day care settings, *Child Abuse & Neglect*, 23(9):891-898.

Summary: Identified variables associated with abuse of children in day care centers and homes and specified risk factors. Literature regarding physical (PA), sexual (SA) and ritual child abuse (RA) was reviewed, focusing on identification of variables associated with victims, perpetrators, and settings. PA most frequently occurred in the form of over discipline, was a response to prior conflict with the child, and may have been inadvertently supported by parental permission for corporal punishment. SA often include PA and occurred less frequently in centers than in homes, but effects on the victim seemed worse in centers because severity was worse. A Satanic overtone frequently associated with RA, and RA with SA was most devastating. Effects were not temporary. Males predominated the perpetrator profile. Multiple perpetrator abuse was worse. Failure of center staff to report suspicion of abuse by fellow staff or parents was cited as a worry by several researchers.
Citation: Thompson, Laible, & Robbennolt (1997), Child care and preventing child maltreatment, in Dunst & Wolery (Ed.), Advances in early education and child care, Vol. 9, 173-202.

Summary: Examines the nature of social support and its efficacy in preventing child abuse and neglect, the characteristics and needs of abuse prone parents, the roles of child care providers, and the institutional and economic conditions that can make child care programs uniquely valuable but challenging settings in which to assist families at risk.

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Citation: Zellman (1992), The impact of case characteristics on child abuse reporting decisions, Child Abuse & Neglect, 16(1):57-74.

Summary: Surveyed 1196 mandated reporters (physicians, social workers, psychologists, principals) about their child abuse reporting behavior, using vignettes in which case and characteristics were systematically varied. Data reveal that abuse relevant judgments and reporting intentions varied as a function of case characteristics. Three case characteristics (previous abuse, severity of abuse, and recantation) were powerful predictors of vignette outcomes. Previous abuse led to judgments of greater seriousness. When the alleged victim retracted his/her accusation on questioning by an authority figure, respondents were significantly less likely to intend a report. Child age, perpetrator intent, and family socioeconomic status also influenced abuse relevant judgments and reporting intentions. Respondents were more likely to intend a report (make a report) when younger children, lazy or angry perpetrators, and children from poorer families were portrayed.

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Citation: Haldopoulos & Copeland (1992), Case studies of child care training volunteers found to be at risk for abuse, Early Child Development & Care, 68, 149-158.

Summary: Conducted a comprehensive screening and training program designed to train women interested in obtaining jobs as infant caregivers. Over 100 women registered for training over a three year period, most of them low socioeconomic status urban dwellers seeking minimum wage jobs in the suburbs. Subjects were administered an open ended screening interview that assessed past history, child care knowledge, and individual personality dynamics. Ten percent of subjects were screened out of the program because they were rated as being high risk for child abuse. The case histories of six subjects are presented to illustrate the dynamics involved in the high risk rating, which included history of physical abuse, potential emotional abuse, and sources of anger. All of the high risk subjects sincerely saw themselves as potentially good child care providers, indicating the need for effective screening of potential child care providers.

ADDITIONAL RESOURCES:

Child Welfare Information Gatewaywww.childwelfare.gov 1250 Maryland Avenue, SW Eighth Floor Washington DC 20024 1.800.394.3366info@childwelfare.gov

National Committee for the Prevention of Child Abuse PO Box 2866 Chicago, IL 60690-9950 Phone: 312-663-3520 http://childabuse.org

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IMMUNIZATIONS INDICATOR

This indicator only has one standard selected because the ACIP and AAP are the standards in the field related to immunizations for young children.

CFOC STANDARD (1992):

APP 26the latest version of the Advisory Committee on Immunization Practices (ACIP) of the U.S. Public Health Service and the American Academy of Pediatrics (AAP) immunization schedule.

RESEARCH REVIEW/GAP ANALYSIS:

Since child care settings are associated with outbreaks of illness, and attendees have more frequent and severe infectious illnesses and receive more antimicrobial agents than children cared for at home, the increased use of child care has significantly impacted the epidemiology and cost to society of infectious diseases in the United States (Holmes, Morrow, & Pickering, 1996).

Immunizations are both a process indicator and an outcome indicator, which help protect children not just during childhood but for the rest of their lives. Immunizations are one of the most effective means for controlling the spread of infectious diseases in child care. Young children in child care face a greater risk of acquiring infectious diseases as compared to older children and adults (Pickering & Solomon, 1994). Licensed child care facilities typically require up-to-date immunizations for entrance, so vaccine-preventable diseases should have a reduced incidence compared to the general population. For example, the use of the Hib vaccine has led to a dramatic decline in the incidence of invasive disease caused by haemophilus influenzae type B.

Though immunization rates in child care have increased over the years, higher overall immunization rates are still needed. Linking child care payments to immunizations is one approach. Most parents believe immunizations should be undertaken for health reasons rather than monetary reasons and are ambivalent about linking child care payments to immunizations. However, research (Bond, Nolan, & Lester, 1999) has shown that immunization levels in child care could be increased by as much as 10% with this strategy. Responses from parents indicate that opportunistic immunizations (e.g., immunizations given at child care facilities or in a mobile immunization van) and evening immunization services would be welcome changes to current immunization services. This study suggests that both flexible immunization provision and government incentives may work together to increase immunization rates.

Statewide systems can help by keeping track of immunization rates and enacting systems for continued improvement. ECELEarly Childhood Education Linkage System, in Pennsylvania, is a very effective and highly evaluated program where the licensing inspection system shares data with ECELS on a quarterly basis so that ECELS can follow up with sites that are having difficulty meeting immunization standards. This is a unique partnership between a state agency and one of its contractors (Fiene, 1995). Another study (OMara & Isaacs, 1993) demonstrated that reviewing and monitoring child care center records increases the reported rate of correctly immunized preschool children. Other studies have also shown that monitoring records increases compliance with guidelines (Aronson & Aiken, 1980). ECELS has utilized the latest computer technology by using software algorithms to determine vaccine compliance for children. Not only does this technology track children's immunization status, it holds particular promise in producing positive change by following up with programs that have low compliance levels.

Two very important studies regarding illnesses in child care that have been conducted by the Washington Department of Public Health and the Centers for Disease Control and Prevention (MacDonald et al. 1997, Cordell et al. 1997). These studies address illnesses and absence due to illness among children who attend child care facilities in Seattle-
King County, Washington. The first study (Cordell et al., 1997) compared incidence of illness and absence among children attending child care homes and child centers. The other study (MacDonald et al., 1997) explored passive surveillance for communicable diseases, seeking to develop and evaluate models for public health surveillance of illnesses among children in out-of-home child care facilities. States can consider the alternative models that these two studies provide when attempting to establish and implement a statewide surveillance system for tracking illnesses in child care.

**SUMMARY TABLE:**

<table>
<thead>
<tr>
<th>Citation</th>
<th>Title</th>
<th>Summary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bond &amp; Lester (1999)</td>
<td>Immunization uptake, services required and government incentives for users of formal day care, <em>Australian &amp; New Zealand Journal of Public Health</em>, 23(4):368-76.</td>
<td>To determine immunization uptake in children attending formal day care prior to the introduction of certificates and parent incentives, and to document parent and child caregivers attitudes to these strategies. In 1997, 60 child care centers and 300 family day care providers in suburban Melbourne were randomly sampled. Immunization dates, service use and preference, and views on government incentives were obtained from parents of children under three years of age. Providing client focused, flexible immunization services and government incentives and legislation may work together to boost immunization levels for those in formal child care.</td>
</tr>
<tr>
<td>Ferson (1997)</td>
<td>Infection control in child care settings, <em>Communicable Diseases Intelligence</em>, 21(22):333-7.</td>
<td>Over one-third of all under 5-year-old Australian children use some form of licensed child care. The majority of research on infectious diseases in children using care, mainly emanating from North American and Scandinavia, suggests that children in preschool or long day care suffer more frequent infections and more days of illness than those cared for a home or in family day care. In order to minimize these risks it is necessary to apply infection control principles. In this study infection risk factors are outlined and recommendations for immunization, preventative practices, the use of antibiotics and outbreak management are presented.</td>
</tr>
<tr>
<td>OMara (1993)</td>
<td>Evaluation of registered nurses follow-up on the reported immunization status of children attending child care centers, <em>Canadian Journal of Public Health</em>, 84(2):124-7.</td>
<td>The purpose of this study was to evaluate whether follow up by nurses increased the reported rate of correctly immunized preschoolers in child care centers. Records from 14 randomly selected child care centers from the Hamilton-Wentworth area (n=514 records) were assessed for the number of correctly immunized preschoolers by two nurses operating in different centers. The nurses advised the centers about all incomplete records and reminded parents to update their childs immunization status. One nurse revisited all her assigned centers two to five weeks later. Both nurses returned to the child care centers to reevaluate the records two to eight months after the initial contact. Three hundred and eighty-two records were available for the second review (25% drop out rate). The reported rates increased significantly for all immunizations. There was no difference when the follow up intervention was greater. This study suggests that monitoring records improves the completeness of records in child care centers.</td>
</tr>
</tbody>
</table>
Summary: Describes Pennsylvanias comprehensive child day care and early childhood development training system, focusing on the Early Childhood Education Linkage System (ECELS) and its immunization initiative. The initiative was established to improve the overall immunization status of all children in child day care in the state.

Citation: Carter & Bumpers (1992), We must immunize every child by two, Dimensions, 20(2):5-6.

Summary: Discusses the development and initial implementation of the Every Child By Two project. The project is designed to immunize as many newborn through two year old children in the United States as possible against communicable childhood diseases and to create a program to systematically immunize this age group in the future.


Summary: Is it safe to send a child with a temperature of 100 degrees F to child care? How soon after the start of therapy can a preschooler with conjunctivitis return to child care? As the number of children attending such facilities rises, you can expect to hear more of these questions from anxious parents. You can help reduce the risk of infectious disease transmission by making sure that vaccination is up to date in all preschoolers; also, pneumococcal vaccination is mandatory for children 2 years and older with serious pulmonary, cardiac, or hematologic illnesses. Give parents a checklist of safety features to consider when they are looking for a child care center; remind them that the risk of injury can be lowered by such measures as continuous staff supervision, use of child safety devices, and provision of foods and toys that cannot easily be aspirated.

Citation: Pickering & Solomon (1994), Day care infections: children at risk, Patient Care, 28(9):118-21.

Summary: Day care centers provide a setting for transmission of respiratory and GI infections. Proper immunization, preventive measures, and prompt reporting of outbreaks are the keys to control.


Summary: This study presents the results of a 1992 project by the Seattle-King County Department of Public Health and the Centers for Disease Control and Prevention to develop and evaluate models that could be used for public health surveillance in child care settings. The study was to determine the feasibility of active public health surveillance in child care settings. The surveillance objectives were to 1) rapidly detect illness outbreaks in particular facilities, 2) give local health officials information on the scope and patterns of illnesses among children in child care, and 3) create a channel for information sharing between child care providers and the Department of Public Health. The study was conducted from July 1992 through March 1994. It began with active surveillance, but changed to passive surveillance based upon the increased effort needed from both child care and the Department of Public Health staff to maintain the system. The study discusses the implementation of the two surveillance models pointing out the pluses and minuses of both approaches.
Citation: Cordell, MacDonald, Solomon, Jackson, & Boase (1997). Illnesses and absence due to illness among children attending child care facilities in Seattle-King County, Washington, *Pediatrics*, 100(5), 850-855.

Summary: Although much of the economic impact of child care associated illness in the U.S. is due to parents time lost from work, there are no data on the incidence of absence due to illness among children in various types of out-of-home child care settings. The goals of this study were to compare the incidence of illness and absence due to illness among children attending child care centers and child care homes. From July 1992 through June 1993, child care providers from 91 child care homes and 41 child care centers in Seattle-King County, Washington, provided information on absenteeism and illness for 96,792 child-weeks of observation. The age-adjusted incidence of provider-reported illness episodes among children in child care homes was greater than that among children in child care centers. The age-adjusted incidence of absence due to illness among children in child care homes was less than that among children in child care centers. Results comparing the incidence of illness between children in various types of child care settings may be influenced by information sources. The incidence of illness among children in child care homes may be greater than that among children in child care centers. The increased incidence of absence due to illness among children in child care centers compared with that among children in child care homes probably reflects differences in exclusion and attendance policies and practices between there two types of settings.

**ADDITIONAL RESOURCES:**


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**STAFF CHILD RATIO AND GROUP SIZE INDICATOR**

These indicators only have one standard represented because in the national data base a specific state regulation that deals with staff child ratio and group size exists. Even so, the variation of these regulations among the states is great. While some states meet or almost meet these standards for staff child ratio and group size, many states do not. Of all the indicators, the greatest variation occurs in how state regulations match up with the national standard for staff child ratio and group size.

**CFOC STANDARD (1992):**

ST 002
Child:staff ratios for centers and large family child care homes shall be maintained as follows during all hours of operation:

<table>
<thead>
<tr>
<th>Age</th>
<th>Child-staff ratio</th>
<th>Maximum group size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Birth-12 months</td>
<td>3:1</td>
<td>6</td>
</tr>
</tbody>
</table>
When there are mixed age groups in the same room, the child:staff ratio and group size shall be consistent with the age of the majority of the children when no infants or toddlers are in the mixed age group. When infants or toddlers are in the mixed age group, the child:staff ratio and group size for infants and toddlers shall be maintained.

RESEARCH REVIEW/GAP ANALYSIS:

HEALTH

Review of all the major research in child care clearly demonstrates the importance of maintaining appropriate child:staff ratios and group sizes. Child:staff ratios and group sizes are two of the best indicators for determining the quality of a child care program and they significantly effect many other health and safety issues. Smaller group size is associated with a lower risk of infection in child care. The risk of illness in children between the ages of one and three years of age increases as the group size increases to four or more, whereas children in groups of three or fewer have no more risk of illness than children cared for at home (Bartlett, Orton, & Turner, 1986; Bell, Gleiber, Mercer, Hifer, Guinter, Cohen, Epstein, & Narayanan, 1989). The risk of repeated ear infections increases in one- to six-year-old children who attend child care in groups of more than six children (Hardy & Fowler, 1993).

The risk of hemophilus influenzas increases for children one year of age or older in a child care setting with four or more children, and the risk of infection peaks in settings with 21 or more children. Research indicates that group size should be limited to twice the maximum number of children allowed per adult. Smaller child care centers, not just those with smaller class sizes, have lower rates of disease. Outbreaks of Hepatitis A occur at the rate of 3% in centers that enroll less than 20 children but 53% in those that enroll 51 or more children (Hadler, Erben, Francis, Webster & Maynard, 1982). Children in small child care centers in France had two to three times the risk of repeated infections (e.g., upper respiratory tract infections, otitis media, conjunctivitis) than children in family child care settings with no more than three children (Collet, Burtin, Kramer, Bossard & Ducruet, 1994).

Lower child:staff ratios reduce the transmission of disease. Although there is little research available that examines the relationship between particular child:staff ratios and childrens health (a major gap that needs to be addressed), the research that is available suggests that fewer children per adult reduces the transmission of disease because
caregivers are better able to monitor and promote healthy practices and behaviors (Bredekamp, 1990; Hayes, Palmer, & Zaslow, 1990).

**SAFETY**

Smaller group size improves the caregiving behaviors of staff and the safety of children. The North Carolina Office of Child Care Licensing found that the severity and frequency of complaints (such as reports of severity and frequency of complaints or reports of abuse and neglect) were higher in child care centers serving 30 or more children (Russell & Clifford, 1987). Caregivers in small groups spend substantially more time interacting (praising, responding, comforting, questioning, and instructing) with children and are more actively involved with the children in their care (Ruopp, Travers, Glantz, & Coelen, 1979).

Lower child:staff ratios are associated with fewer situations involving potential danger (such children climbing on furniture (Hayes, Palmer & Zaslow, (1990); and child abuse (Howes, 1990). Having a second adult in a child care facility reduces the chances for child abuse (Howes, 1990). When centers and family child care homes have insufficient staff, caregivers are often burdened with the care of more children than they can manage, which increases their stress and makes it more likely that they will abuse the children (Deitch, 1987). Additional staff enables teachers to leave stressful situations until they are ready to cope with and respond to the children in a manner that does not inflict harm.

**MENTAL HEALTH/SCHOOL READINESS**

Research suggests that children in groups of 12-14 with two caregivers are more cooperative, compliant, and exhibit more reflection/innovation than children in groups of 24-28 with four caregivers. Children in smaller groups also exhibit more social competence than children in larger groups (Clarke-Stewart, Gruber, & Fitzgerald, 1994). Children become securely attached to individuals whom they trust to care for them in a responsive and sensitive manner. Caregivers with small groups are more actively involved and spend more time interacting with children; they are more responsive, more socially stimulating, and less restrictive than caregivers in larger groups (NICHD Early Child Care Research Network, 1996). These behaviors correspond to those found in caregivers of securely attached children. Securely attached children tend to be more advanced in their play, less aggressive and withdrawn, and more socially competent than children who are insecurely attached (NICHD Early Child Care Research Network, 1996).

Children receive less attention, affection, responsiveness, and stimulation from caregivers each time a single child is added to a group (Clarke-Stewart, Gruber, & Fitzgerald, 1994). Caregivers have more positive, nurturing interactions with children and provide children with more individualized attention when they are in charge of smaller groups of children with smaller child:staff ratios (Dunn, 1993). Children who have highly involved caregivers tend to exhibit behaviors suggestive of secure attachment (e.g., they explore unfamiliar surroundings more, have more contact with the caregiver, and orient more to the caregiver than to a stranger) more than children with less involved caregivers (Anderson, Nagle, Roberts, & Smith, 1981).

Children who are members of larger groups and receive less individual attention show lower gains in PSI (Preschool Inventory) scores than children who are members of smaller groups and receive more individual attention. Children with higher language development scores tend to have caregivers who are more responsive, more sensitive, and less detached (Whitebook, Howes, & Phillips, 1989).

Smaller group size is associated with more developmentally appropriate classroom activities than larger group size. Groups of six or fewer infants, 12 or fewer toddlers, and 18 or fewer preschoolers are more likely to engage in developmentally appropriate activities than children in groups that exceed these numbers (Howes, Phillips, &
When children are expected to perform at unattainable levels, they may feel overwhelmed and thus be less motivated to excel at academic pursuits (Eccles, Wigfield, & Schiefele, 1998).

Lower child:staff ratios are associated with less distress in toddlers, less apathy and distress in infants (Hayes, Palmer, & Zaslow, 1990), and greater social competence (Clarke-Stewart, Gruber, & Fitzgerald, 1994). Children in classrooms with lower child:staff ratios engage in more talk and play (Howes & Rubenstein, 1981) and display more gestural and vocal imitation (Francis & Self, 1982) than children in classrooms with higher child:staff ratios. Children who engage more frequently in conversations with caregivers tend to develop better socially (Clarke-Stewart, 1987).

Children in classrooms having lower child:staff ratios (i.e., 3:1 for infants, 4:1 for toddlers, 9:1 for preschoolers) are more likely to have positive interactions with caregivers, be properly supervised, and be engaged in activities rated as good or very good (NICHD Early Child Care Research Network, 1996; Howes, Phillips, Whitebook, 1992). Lower child:staff ratios relate to more developmentally appropriate caregiving and sensitivity (Whitebook, Howes, & Phillips, 1989); more contact (e.g., talking, playing, touching, and laughing) with children (Smith & Connolly, 1981); more responsive and stimulating behavior (NICHD Early Child Care Research Network, 1996); and less restriction of childrens behavior (e.g., less commanding, correcting (Howes, 1983). Additional caregivers reduce the amount of irritability and restrictiveness that caregivers express to the children in their care (Rubenstein, Howes, & Pederson, 1982). Lower child:staff ratios are associated with higher rates of secure attachments between toddlers and their caregivers (Howes, Rodning, Galluzzo, & Myers, 1988).

Lower child:staff ratios are associated with more verbal communication between caregivers and children, which appears to foster language development in children. Adults and children talk to one another more when there is a lower child:staff ratio (Palmerus, 1996), and caregivers engage in more dialogues (i.e., verbal communications between a caregiver and child that involve an exchange of at least three turns) and fewer monologues (i.e., verbal communications between a caregiver and child that contain only one or two sentences and involve only one or two turns (Palmerus, 1996)). More adult-child verbal interactions predict better scores on language inventories, whereas more peer verbal interactions predict lower scores on these measures (McCartney, 1984). Lower child:staff ratios allow caregivers to engage in more educational activities (e.g., teaching, promoting problem-solving) with children (Palmerus, 1991).

**SUMMARY TABLE:**


Summary: This study assessed outcomes for children when child care centers meet recommended care standards. Data from the NICHD study of early child care were used to examine the association between meeting standards for child staff ratios, group sizes, caregiver training, and caregiver education and childrens development at 24 and 36 months of age. There were five major findings: 1) most classes observed did not meet all four recommended standards; 2) linear associations were found between number of standards met and child outcomes, and this was more the case at 36 months than at 24 months of age; 3) there was no evidence of threshold effects; 4) children in classes that met more standards had better school readiness and language comprehension scores as well as fewer behavior problems at 36 months of age; 5) child outcomes were predicted by child staff ratio at 24 months and caregiver training and education at 36 months of age. Outcomes were better when children attended classes that met recommended child staff ratios and recommended levels of caregiver training and education.

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Summary: In a pilot study based on parent and teacher ratings, the number of hours spent in substitute care during the first three years of life correlated with children’s levels of behavior problems in preschool. The developmental period from 18 to 24 months was the most sensitive to the use of substitute care, and boys were more negatively affected than girls. The child adult ratio and setting were not significant factors. Results suggest reconsideration of parental leave policies and direction for future research.

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Summary: Studies of extensive, full time child care in infancy and early childhood have shown negative, positive and no effects on children’s social emotional development. The current study explored the prediction of children’s behavioral adjustment four years after assessments of day care center quality and of the home and family environment. Participants included 141 school age children and their employed mothers who had made use of full time child care when the children were toddlers or preschoolers. Home environment factors and earlier behaviors were predictive of individual differences in adjustment four years later, particularly for maternal ratings of child behaviors. By contrast, indicators of center quality were generally unrelated to mother and teacher ratings of behavioral adjustment.

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Summary: This study investigates children’s experiences at 30 school aged child care programs. Regulatable features such as total enrollment, child staff ratio, and staff education were assessed via director report. Observers recorded positive/neutral and negative interactions, and rated programs in terms of flexibility and age appropriateness. Negative staff child interactions were more frequent when child staff ratios were larger and when staff had less formal education. The presence of a greater number of different types of program activities was associated with staff having more frequent positive interactions with children and with observers rating programs as flexible and age appropriate.

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Citation: Burchinal, Roberts, Nabors, & Bryant (1996), Quality of center child care and infant cognitive and language development, *Child Development*, 67(2):606-20.

Summary: The relations between quality of center based child care and infant cognitive and language development were examined in a sample of 79 African-American 12 month old infants. Both structural and process measures of quality of child care were collected through interviews with the center director and observation of the infant classroom. Results indicated that quality of infant care positively correlated with scores on standardized assessments of cognitive development, language development, and communication skills. These findings, in conjunction with the growing child care literature, suggest that researchers and policymakers should focus on how quality of child care can be improved to enhance, not impair, infant development.

Summary: This study assesses whether day care is a significant risk variable for otitis media in children younger than 2 years in the United States after controlling for the number of children in the day care group. After controlling for the total size of the day care group for children younger than 12 months, the previously established relationship between attending a day care center and frequent ear infections is reduced from an odds ratio of 3.17 to an odds ration of 1.34. The total size of the day care group is an important intervening variable in the relationship between attending day care and frequent ear infections for children younger than 12 months. The size of the day care group rather than the day care per se is the primary modifiable risk variable for many working parents.

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Summary: Contact spread of enteropathogens in day care centers is supported by the recovery of fecal coliforms from hands and day care center fomites. This prospective study was conducted to determine what, if any, quantitative measures of fecal coliforms predict the risk of diarrhea among day care center attendees. Diarrheal illness without concomitant respiratory symptoms was monitored among 221 children under 3 years of age in 37 classrooms through biweekly parental telephone interviews from 10/88 to 5/89 in Cumberland County, North Carolina. This was the first study to demonstrate an increased risk of diarrhea associated with fecal contamination and the frequent sink contamination in day care centers.

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Citation: Howes & Whitebook (1992), Thresholds of quality: implications for the social development of children in center based child care, *Child Development*, 63(2):449-60.

Summary: The quality of center child care relationships with adults and peers for 414 children (ages 14 to 54 months) were assessed. Classrooms were classified by ratio and group size provisions of the FIDCR and by the ECERS and ITERS. Children cared for in classrooms meeting the FIDCR ratios were more likely to be in classrooms rated as good or very good in caregiving and activities. Children in classrooms rated as good or very good in caregiving were more likely to be securely attached to teachers. Securely attached children were more competent with peers. Children cared for in classrooms meeting FIDCR group size were more likely to be in classrooms rated higher in activities. Children in classrooms rated high in activities were likely to orient to both adults and peers. Children with social orientations to adults and peers were more competent with peers.

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Summary: Examined effects on the quality of childrens child care environments of a) the stringency of state child care regulations; b) voluntary compliance with proposed federal child care standards; and c) the legal auspice of the center. Quality of care was assessed in 227 child care centers in five metropolitan areas. Centers in states with more stringent child care regulations tended to have better staff child ratios, staff with more child related training and lower staff turnover rates. Similarly, centers that more fully complied with the ratio, group size, and training provisions of a set of proposed federal child care standards had significantly lower staff turnover rates, more age appropriate
classroom activities, less harsh and more sensitive teachers, and more teachers with specialized training. For profit centers offered children less optimal care than did nonprofit centers. These findings are placed in the context of ecological models of research and of contemporary policy debates about child care.

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Citation: Fiene (1997), Searching for a solution to the child care trilemma, *Child Care Information Exchange*, 117:57-60.

Summary: Describes the trilemma of inadequate quality, accessibility, and affordability of American child care. Proposes addressing the quality sector by utilizing a model which determines adult child ratios based upon quality of staff. Model argues the more highly qualified the program staff, the higher the quality of the overall program.

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Summary: Two studies examined impact of teacher background and teacher child ratio on child and teacher behavior in a child care environment. Both studies indicate more effective performances produced by teachers with higher degrees. One study suggests lower ratios are more effective. No interactive effect of ratio and background was noted.

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Citation: Kontos & Wilcox (1997), Teachers interactions with children: why are they so important: research in review, *Young Children*, 52(2):4-12.

Summary: Reviews research demonstrating a positive relationship between childrens quality interactions with teachers and their enhanced cognitive, socio-emotional, and language development. Discusses most frequently studied aspects of teacher behavior including roles, sensitivity/detachment, involvement and teacher talk. Describes influences on interactions including child characteristics, training, ratio, group size and curriculum. Summarizes implications for teachers, and lists recommended adult child ratios.

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Summary: Describes and contrasts aspects of child care systems in France and the US to stimulate discussion of child care standards. French child care is characterized by highly trained and reasonably compensated teachers who work in classrooms with class sizes and child adult ratios considered excessive by US standards.

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Citation: Howes et al. (1992), Thresholds of quality: implications for the social development of children in center based child care, *Child Development*, 63(2):449-60.
Summary: Examined thresholds for two aspects of child care: adult child ratio and group size. Investigated associations among different levels of these variables and with quality of care and children's social development. Findings suggest that meeting licensing standards for ratios and groups has a positive effect on ratings of the quality of care provided for children.

Citation: Essa (1998), When, how and why child caregivers respond to children's behaviors, *Early Child Development and Care*, 141, 15-29.

Summary: Forty-two female child caregivers participated in one of six focus groups to examine how, when, and why they discipline young children. Aggressive behavior, not listening, and sexually related behaviors were the most likely behaviors to concern caregivers. These behaviors most frequently elicited the disciplinary strategies of time out, explanations, and redirection. How caregivers respond to misbehaviors was analyzed in terms of the attributions the caregivers make in regard to these misbehaviors. Age, gender, home, family, society, caregiver emotion, and child care setting circumstances were the most frequently mentioned factors to affect caregiver discipline. Results also indicate that caregivers with higher levels of early childhood education and experience, and those working with smaller group and adult to child ratios provide more thoughtful answers that are more congruent with developmental appropriateness.


Summary: Examined 718 infants, toddlers and preschoolers who were enrolled in 120 child care centers from Massachusetts, Virginia, and Georgia to determine the effects of quality of care on children's social outcomes. Four auspices of child care centers were sampled: nonprofit, local for profit, national chains for profit, and church sponsored. Social outcomes included mothers ratings of attachment, observations of social skills in classroom, and parents rating of behavior problems. Quality of care assessment was based on teacher characteristics, teacher child ratio, and teacher child interactions. Results show that there were few associations between teacher child interaction and children's social outcomes. Higher work family interference was associated with poorer social outcomes generally. Children in nonprofit centers had better social outcomes on some measures.

Citation: Palmerus (1996), Child caregiver ratios in day care center groups: impact on verbal interactions, *Early Childhood Development and Care*, 118, 45-57.

Summary: Explored the effect of caregiver child ratio on verbal interactions in six public day care center groups for preschool children in Sweden. Detailed records of verbal interactions were studied in one group where the number of children/caregiver had changed from 4.25 to 5.67. Caregivers were the main target for observation. Audio recorded verbal communications were coded and analyzed. Data were collected on three occasions in year 1 and on three occasions in year 2. With a high ratio the proportion of child initiated verbal activities to the caregivers decreased, the proportion of adult initiated verbal activities increased, and the amount of verbal interaction between caregivers decreased.

Summary: Assessment of quality of care in 363 classrooms with infants, toddlers, and preschool children was conducted in 120 child care centers in three states. Assessment measures included the ITERS, ECERS, and the Assessment Profile. Regulatable aspects of quality of child care included: ratio of caregivers to children, group size, teacher training in child development or child care, teacher education, highest wage paid to a center teacher, and staff turnover. Process measures proved to be highly redundant, both internally and with each other. Much smaller sets of items, drawn randomly from the instruments item pools were found to be perfectly acceptable measure of quality. Regulatable measures did not prove to be acceptable measure of quality, except for teachers wages, which were highly correlated with process measures of quality.

Citation: Dunn (1993), Ratio and group size in day care programs, *Child & Youth Care Forum*, 22(3):193-226.

Summary: Reviews literature on the influences of ratio and group size on childrens development in day care. When measured separately, ratio and group size are sometimes, but not always related to childrens development. When included as variables in quality clusters, ratio and group size are more likely to be related to developmental outcomes. Group size more consistently influences development in the expected direction than ratio. This suggests the need for increased attention to group size in the policy arena. Ratio and group size have been found to have both direct and indirect effects on development indicating that they are potentially valuable as proxy measures of childrens experience in day care programs.

ADDITIONAL RESOURCES:

National Association for the Education of Young Children (NAEYC) 1509 16th Street, NW Washington DC 20036 1-800-424-2460 http://www.naeyc.org

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**STAFF (DIRECTOR AND TEACHERS) QUALIFICATIONS INDICATORS**

These two indicators overlap some with the next indicator that deals with training. Separating out state regulations that deal with these two indicators is difficult because qualifications and training form a continuum. Therefore, drawing a line between these indicators is generally arbitrary. Fifteen standards are related to this indicator and four standards are related to the training indicator.

**CFOC STANDARDS (1992):**

ST 006: The director of a center enrolling fewer than 60 children shall be at least 21 years old and shall have an undergraduate degree in early childhood education, child development, social work, nursing, or other child related field, or a combination of college coursework and experience under qualified supervision. Education shall include a course in business administration or equivalent on the job training in an administrative position; a minimum of four courses in child development and early childhood education; and 2 years' experience as a teacher of children of the age group(s) in care.
ST 007: The director of a center enrolling 60 or more children shall be at least 21 years old and shall have an undergraduate degree in early childhood education, child development, social work, nursing, or other child related field, or a combination of college coursework and experience under qualified supervision. Education shall include one course in administration or at least 6 months' experience in administration, and 3 years' experience as a teacher of children of the age group(s) in care.

ST 008: Centers enrolling 30 or more children must employ a non-teaching director. Centers with fewer than 30 children may employ a director who teaches as well.

ST 009: In addition to the credentials listed in Appendix A, a director of a center or a small family child care home system enrolling 30 or more children shall provide documentation of one course or 26 to 30 clock hours of training in health and safety issues for out of home facilities, in addition to other educational qualifications, upon employment. This training requirement shall be reduced to a minimum of 17 clock hours for directors of facilities caring for fewer than 30 children. This training shall include at least the following content:

2. Procedures for preventing the spread of communicable disease, including handwashing, sanitation, diaper changing, health department notification of reportable disease, equipment, toy selection and proper washing, disinfecting to reduce disease and injury risk, and health related aspects of pets in the facility.
3. Immunization requirements for children and staff.
4. Common childhood illnesses and their management, including child care exclusion policies.
5. Organization of the facility to reduce illness and injury risks.
6. Training child care staff and children in infection and injury control.
7. Emergency procedures.
8. Promotion of health in the child care setting.

ST 010: In addition to the general requirements in Qualifications of Directors of Centers, the director of a facility for children under 5 years of age shall have not less than 2 to 3 years of experience, depending on the size of the center, as a teacher of infants, toddlers, and preschoolers. Directors of facilities for children ages 0 to 35 months shall have their 2 to 3 years of experience with infants and toddlers. Directors of facilities for children ages 3 to 5 years shall have their 2 to 3 years of experience with preschoolers.

ST 011: In addition to the general requirements in Qualifications of Directors of Centers, the director of a school-age child care facility shall hold an undergraduate degree in early childhood education, elementary education, child development, recreation, or other child related field, or a combination of college coursework and experience under qualified supervision, and not less than 2 years' experience working with school-age children.

ST 034: Directors and large family home caregivers shall check references and examine employment history before employing any staff, including substitutes, who will be alone with a child or a group of children in child care.

ST 012: Caregivers shall have knowledge of child development and early childhood education; an undergraduate degree in early childhood education, child development, social work, nursing, or other child related field, or a combination of experience under qualified supervision and college coursework; 1 year's experience (or the equivalent as specified in Appendix A); and on the job training to provide a nurturing environment and to meet the child's out of home needs.

ST 013: Centers shall employ licensed, certified teaching, caregiving staff for direct work with children in a progression of roles such as the following:
1. aides,  
2. assistant teachers,  
3. associate teachers,  
4. teachers,  
5. lead teachers, and;  
6. education coordinators; Each role with increased responsibility shall have increased educational qualifications as outlined in Appendix A.

ST 014: Every center, regardless of setting, shall have at least one licensed/certified lead teacher (or mentor teacher) who has a Bachelor of Arts, Bachelor of Science, Bachelor of Education, or Master of Education degree in early childhood education, child development, social work, nursing, or other child-related field, in addition to at least 1 year of experience working in child care serving this age group. All teachers in charge of a group shall be licensed/certified as lead teachers, teachers, or associate teachers, with education and experience related to the care and development of infants and toddlers, as well as supervised experience with this age group.

ST 015: Caregivers shall want to work with infants and toddlers when asked and shall know what the job entails- fostering interaction, diapering, bathing, feeding, holding, comforting, and responding.

ST 016: Every center, regardless of setting, shall have at least one licensed/certified lead teacher (or mentor teacher) who has a Bachelor of Arts, Bachelor of Science, Bachelor of Education, or Master of Education degree in early childhood education, child development, social work, nursing, or other child-related field, as well as at least 1 year of experience working in child care with this age group. All teachers in charge of a group shall be licensed/certified as lead teachers, teachers, or associate teachers, with education in child development and early childhood education specific to this age group, as well as supervised experience with preschool children.

ST 017: Caregivers shall demonstrate an ability to apply their understanding of the developmental characteristics of 3- to 5-year-olds. Caregivers shall demonstrate knowledge and understanding of these children's independence and social competence, more complex inner lives, and increasing ability to adapt to their environment and cope with stress.

ST 018: Every center, regardless of setting, shall have at least one licensed/certified group leader (or mentor teacher) who has a Bachelor of Arts, Bachelor of Science, Bachelor of Education, or Master of Arts degree in child development or early childhood education covering ages newborn to 8 or 3 to 8, elementary education, recreation, or a related field, as well as at least 1 year of experience working in child care. Teachers in charge of a group shall be licensed/certified as lead teacher, teacher, or associate teacher with education in child development and programming specific to this age group; they shall also have supervised experience with school-age children. Caregivers shall have training and supervised experiences in child development and education.

ST 019: Caregivers shall demonstrate knowledge about the social and emotional needs and developmental tasks of 5- to 12-year-old children, and shall know how to implement a nonacademic, enriching program.

**RESEARCH REVIEW/GAP ANALYSIS:**

Caregivers should be encouraged or required to have as much general education and/or specific training in child development, health, and safety as possible because educated and trained caregivers are more likely to promote the physical and mental health, safety, and cognitive development of the children in their care. Child care directors who have more experience and education are more likely to appropriately monitor staff, which promotes children’s health. Higher rates of diarrhea have been found in child care centers where the directors had less than eight years of experience (Soto, Guy, Deshaies, Durand, Gratton & Belanger, 1994). Caregivers are more likely to exhibit behaviors
that protect childrens health and safety if their behavior is monitored (Black et al., 1981). Staff surveillance requires knowledge of behaviors that reduce the transmission of disease; this suggests that child care directors should have as much or more education in child development and health than the direct caregivers they supervise.

Caregivers with a bachelors degree with or without specialized training or with no bachelors degree but with specialized training at the college level behave more sensitively and less harshly, engage in more positive interactions (more warmth, more enthusiasm, and more developmentally appropriate communication with children) and display less detachment (more involved with and interested in the children) and less punitiveness (less hostile, threatening, and harshly critical of children) (Arnett, 1989; Whitebook, Howes, & Phillips, 1989).

Caregivers with more education have children who are more compliant and socially competent (Clarke-Stewart, Gruber, & Fitzgerald, 1994). College-educated caregivers encourage children more, exhibit more teacher direction (developing goals for children without pressuring the children to accept them), and engage in less restrictive behavior with children than do high-school-educated caregivers (Berk, 1995). Caregivers who complete at least two child-related courses at the community college level hold less authoritarian attitudes (like strict rules, little give-and-take about rules, assertive discipline strategies, and emphasis on conformity) than those who have no training at all (Arnett, 1989). Such attitudes toward caregiving appear to influence the behavior exhibited by caregivers (Holden, 1995). The promotion of independence contributes to the development of social competence and school readiness in children.

Caregivers with more education are more likely to continue in child care employment (Berk, 1985), which promotes attachment and social development in children. Caregivers who plan to continue in child care employment are less restrictive, place a greater emphasis on the development of childrens verbal skills, and have better child-oriented attitudes than those who do not plan to continue working in child care. Children who have stable caregivers are more likely to engage in social activities, spend less time aimlessly wandering around the center (Whitebook, Howes, & Phillips, 1989), and are more likely to display secure attachments (Hayes, Palmer, & Zaslow, 1990), which is a major component of later healthy personal/social development.

Caregivers with college educations tend to engage children in interactions that expand upon and extend childrens ongoing activities and promote the development of verbal skills (Berk, 1985). College-educated caregivers are almost three times as likely to display behaviors that promote the development of verbal skills (such as encouraging children to express themselves verbally, explaining the meaning of words, giving factual information) than caregivers with only a high school diploma (Berk, 1985). Children who have caregivers who answer their questions, engage them in more informative talk, and give information to and request information from them have higher language competence and intelligence test scores (McCartney, 1984).

Children tend score higher on the Preschool Inventory (a measure of childrens knowledge of shapes, sizes, parts of the body, spatial relationships, etc.) and other measures of intellectual ability (like language comprehension, verbal fluency, memory, object recognition, and knowledge of concepts) when they are cared for by caregivers with more years of education (Clarke-Stewart & Gruber, 1984).

**SUMMARY TABLE:**

Citation: Bloom (1997), Navigating the rapids: directors reflect on their careers and professional development, *Young Children*, 52(7):32-38.

Summary: In an effort to address issues concerning credentialing early childhood directors, explores career decisions and provides a framework for understanding the growth and development of director competence through the career cycle. The career cycles of beginning, competent, and master directors, and the growth and change which occur, are detailed.

Summary: This study examined the structure of child care classrooms and centers to predict process quality. Costs and quality of early childhood center based care in four states with varying levels of regulation were analyzed to identify characteristics of the teacher, classroom, director, and center related to child care quality.

Citation: Galinsky, ODonnell, Sazer, & Boose (1996), *Florida child care quality improvement study*.  
Summary: The ongoing Florida child care quality improvement study investigates how Floridas new ratios and education requirements for early education and care affect childrens development, parents lives, and the early childhood marketplace. The project consists of three interrelated studies: the childrens study, the parent study and the market study. The report summarizes the findings of all three studies in 1992 and 1994, and reports new findings from the 1996 children study. Among the findings noted are the following: 1) increased teacher education and ratio requirements significantly contributed to a number of positive outcomes in childrens development in 1994 and continue to improve in 1996; 2) in comparison with other national multi-site studies of the overall quality of early education and care, Florida has made positive strides; 3) increased staff education and more rigorous ratio requirements did not have a marked negative impact on the child care marketplace nor did requirements significantly affect consumer costs during the 1992-96 period; 4) the greatest gains in childrens development and in the quality of the early childhood education and care occurred when classrooms met professionally recommended ratios, which are higher then the new Florida ratios; and 5) teachers with an advanced education had the highest scores in terms of childrens development and classroom quality; however, in 1996, teachers with a CDA or equivalency were warmer and more sensitive as well as more responsive with children than those with less than a CDA.


Summary: Two studies examined impact of teacher background and teacher child ratio on child and teacher behavior in a child care environment. Both studies indicate more effective performances produced by teachers with higher degrees. One study suggests lower ratios are more effective. No interactive effect of ratio and background was noted.

Citation: Rodd (1997), The selection and preparation of early childhood teachers: perceptions of employers and teachers, *Early Child Development & Care, 130*, 99-110.

Summary: Studied perceptions of early childhood teachers and employers regarding early childhood teacher education. Found that previous experience with, attitudes toward, and understanding of children and entry qualifications were weighted higher than age and gender for teacher selection.

Summary: Describes the quality 2000 advancing early care and education initiative; the purpose is to address the quality crisis in early childhood education. Details eight areas of improvement and recommendations: quality, results, family engagement, staff credentialing, staff training, licensing, funding, and governance structures.

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Citation: Snow et al. (1996), Child care center licensing standards in the United States, *Young Children*, 51(6):36-41.

Summary: Studied child care quality indicators via a comparison of state child care licensing requirements in three areas: child staff ratio, group size, and caregiver educational requirements. Compared these data to 1981 data to assess changes in licensing regulations. Found both positive and negative changes and that regulations vary greatly state by state.

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Citation: Honig (1996), Early childhood education, training for the future, *Early Child Development & Care*, 121, 135-45.

Summary: Discusses the future training of early childhood educators, focusing on techniques for teachers to build prosocial skills, develop aesthetic appreciation, inculcate acceptance and inclusion, and develop a curiosity for learning among children.

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Citation: Lowenthal (1995), Competencies of the early childhood special educator in the United States, *Early Child Development and Care*, 113, 59-64.

Summary: Discusses the kinds of competencies needed by educators to better assist young children with disabilities and their families. These competencies include: knowledge of early childhood as a distinct phase of development, experiences in working with families, skills in collaboration and coordination, developmentally appropriate intervention, and delivery of services in inclusive settings.

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Citation: Bredekamp (1995), What do early childhood professionals need to know and be able to do?, *Young Children*, 50(2):67-69.

Summary: Describes the purpose and history of guidelines posed by NAEYC for teacher education in BA and advanced degree programs. Summarizes the result of the review processes, describing how the new curriculum guidelines differ from the earlier versions and how the guidelines can be used to shape programs and to influence policy.

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Citation: Morgan et al. (1993), *Making a career of it: the state of the states report on career development in early care and education*.
Summary: Noting that 11 million children are involved in early care and education outside their homes, and that the quality of the services these children receive depends on the knowledge and skills of the people who care for and teach them, this report presents the results of the first national study of career development in early care and education. It examines regulations, training opportunities, and financial support that shape the preparation of center and home based practitioners. The study revealed the lack of a coordinated system to develop well trained practitioners to work with young children in homes, centers, Head Start programs, or schools. Millions of practitioners are not required to have early childhood training. Training that develops the full range of essential early care and education knowledge and skills is not consistently available or accessible.

ADDITIONAL RESOURCES:

The Center for Career Development in Early Care and Education Wheelock College 200 The Riverway Boston, MA 02215 617-734-5200 x2211http://ericps.ed.uiuc.edu/ccdece/ccdece.html

Center for the Child Care Workforce (CCW) 733 15th Street, NW Suite 1037 Washington, DC 20005-2112 Phone: 1-800-879-6784 Fax: 202-737-0370 E-mail: ccw@ccw.org http://www.ccw.org/

National Association for the Education of Young Children (NAEYC) 1509 16th Street, NW Washington DC 20036 1-800-424-2460 http://www.naeyc.org

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STAFF TRAINING INDICATOR

This indicator overlaps with the previous indicators that deal with training. Separating out state regulations that deal with this indicator is difficult because qualifications and training form a continuum. Therefore, drawing a line between these indicators is generally arbitrary. A great deal of variability in this indicator is exhibited when state-to-state regulations are compared. These 11 standards encompass the essence of the regulatory citations.

CFOC STANDARDS (1992):

ST 039: Caregivers shall be educationally qualified in advance for the role they are entering and shall receive orientation training during the week immediately following employment. Caregivers shall also receive continuing education each year. In centers, directors shall ensure that 12 hours of staff meetings are held, in addition to the continuing education specified in Continuing Education.

ST 040: All new full-and part-time staff shall be oriented to, and demonstrate knowledge of, the following items a through o. The director of any center or large family-child-care home shall provide this training to newly hired caregivers. Small family home caregivers shall avail themselves of orientation training offered by the licensing agency, a resource and referral agency, or other such agency. This training shall include evaluation and a repeat demonstration of the training lesson. The orientation shall address, at a minimum:

1. The goals and philosophy of the facility.
2. The names and ages of the children for whom the caregiver will be responsible, and their specific developmental needs.
3. Any special adaptation(s) of the facility required for a child with special needs.
4. Any special health or nutrition need(s) of the children assigned to the caregiver.
5. The planned program of activities at the facility.
6. Routines and transitions.
8. Policies of the facility about relating to parents.
9. Meal patterns and food-handling policies of the facility.
11. Emergency health and safety procedures.
12. General health policies and procedures, including but not limited to the following:
   1. Handwashing techniques, including indications for handwashing.
   2. Diapering technique and toileting, if care is provided to children in diapers and/or needing help with toileting, including appropriate diaper disposal and diaper-changing techniques.
   3. Correct food preparation, serving, and storage techniques if employee prepares food.
   4. Formula preparation, if formula is handled.
13. Child abuse detection, prevention, and reporting.
14. Teaching health promotion concepts to children and parents as part of the daily care provided to children.
15. Recognizing symptoms of illness.

ST 041: Orientation training in centers shall be documented. The director shall document the topics covered and the dates on which the orientation was provided.

ST 042: During the first three months of employment, the center director or large family home caregiver shall document, for all full-time and part-time staff, additional orientation in and the employee's satisfactory knowledge of the following topics for the purpose of noting and responding to illness in the facility. Staff shall not be assigned to tasks involving these topic areas before receiving the orientation training.

   1. Recognition of symptoms of illness and correct documentation procedures for recording illness symptoms.
   2. Exclusion and readmission procedures.
   3. Cleaning, sanitation, and disinfection procedures.
   4. Procedures for administering medication to children and for documenting medication administered to children.
   5. Procedures for notifying parents or legal guardians of communicable disease occurring in children or staff within the facility.
   6. Procedures for performing the daily health assessment of children to determine whether they are ill and whether they need to be excluded from the facility.

ST 043: Staff members shall not be expected to take responsibility for any aspect of care for which they have not been oriented and trained.

ST 044: The director of a center or a large family-child-care home shall ensure that all staff involved in the provision of direct care are certified in pediatric first aid that includes rescue breathing and first aid for choking. At least one certified staff person shall be in attendance at all times and in all places that children are in care.

ST 045: Small family home caregivers should be certified in pediatric first aid training that includes rescue breathing and first aid for choking.

ST 046: Pediatric first aid training, including rescue breathing and first aid for choking, shall be consistent with pediatric first aid training developed by the American Red Cross, the American Heart Association, or the National Safety Council for First Aid Training Institute, or the equivalent of one of the three. The offered first aid instruction shall include, but not be limited to, the emergency management of:

   1. Bleeding.
   2. Burns.
3. Poisoning.
5. Injuries, including insect, animal, and human bites.
6. Shock.
7. Convulsions or nonconvulsive seizures.
8. Musculoskeletal injury (e.g., sprains, fractures).
11. Allergic reactions.
12. Eye injuries.
13. Loss of consciousness.
15. Drowning.

ST 047: Facilities that have a swimming pool or built-in wading pool shall require infant and child CPR training for caregivers. At least one of the caregivers, volunteers, and other adults who are counted in the child:staff ratio for wading and swimming (see standard ST4, p. 3) shall be trained in basic water safety and certified in infant and child CPR each year by a person certified as an instructor in water safety and in CPR. (For small family-child-care homes, the person trained in water safety and CPR shall be the caregiver.) Written verification of CPR and lifesaving certification, water safety instructions, and emergency procedures shall be kept on file.

ST 048: Facilities that serve children with special needs shall have at least one caregiver certified in infant and child CPR. Written verification of CPR certification shall be kept on file.

ST 049: Records of current certification of pediatric first aid including rescue breathing and first aid for choking (and infant and child CPR, when indicated) shall be maintained in the files of the facility.

ST 050: Directors and all caregivers shall have at least 30 clock hours per year of continuing education in the first year of employment, 16 clock hours of which shall be in child development programming and 14 of which shall be in child health, safety, and staff health; and 24 clock hours of continuing education based on individual competency needs each year thereafter, 16 of which shall be in child development programming and 8 of which shall be in child health, safety, and staff health.

RESEARCH REVIEW/GAP ANALYSIS:

Staff training in procedures meant to reduce the transmission of infectious disease reduces the number of pathogens present in child care (Bartlett, et al., 1988), including the number of intestinal illnesses (Butz, Larson, Fosarelli & Yolken, 1990), the number of cases of diarrhea (Soto, Guy, & Belanger, 1994), the number of upper respiratory infections (Gillis, Holaday, Lewis & Pantell, 1989), and the frequency of illness symptoms (Ulione & Donovan, 1996; Ulione, 1997). After receiving training in hand washing, those who earned the best scores for hand washing had children with lower rates of diarrhea. Further, implementing a health education program reduced the incidence of diarrhea (from 72.7 to 20.4 cases per 100 child-years) and colds (from 208.7 to 94.5 cases (Soto, Guy, Deshaies, Durand, Gratton, & Belanger, 1994). After participating in training to reduce the transmission of infectious diarrhea, 41 of 44 caregivers passed an examination of the procedures they had just been taught. Eight months later, 28 of the 44 originally trained workers and 14 subsequently trained workers were given the same examination. None of the caregivers passed the examination (Bartlett, Jarvis, Katz, Dalia, Englender, & Anderson, 1988). One might infer that caregivers did not practice the behaviors they initially learned. Conversely, instituting a hand washing program for
caregivers and following it up with continuous monitoring of caregivers hand washing practices was associated with a 50% decrease in the incidence of diarrhea in two child care centers (Morrow, Townsend, & Pickering, 1991). Monitoring appears to remind staff of their training and promotes implementation of healthy practices.

Staff training programs reduce the number of accidental injuries in child care centers (Ulione, 1997). Significant decreases in the number of accidental injuries occur after child care staff have been trained in identifying signs and symptoms of childhood illnesses and infection control, preventing child and staff injuries, and providing basic first aid for children (Ulione, 1997). Staff training programs may be more effective when accompanied by staff monitoring. Two years after receiving an intervention that taught child care directors about the specific hazards found on their playgrounds, explained why these problems were dangerous, and distributed educational materials about child safety, inspectors returned to the centers and found that the intervention playgrounds were no less hazardous than centers that did not receive the intervention (Sacks, Brantley, Homgreen, & Rochat, 1992). The intervention might have been more effective if it had been accompanied by monitoring.

Caregivers who receive specialized training are better able to facilitate a positive learning and socialization environment, and tend to have children who are more compliant, more cooperative, less aggressive, and who exhibit fewer negative (i.e., uncooperative, unpleasant, and avoidant) behaviors with an unfamiliar peer in a laboratory playroom (Clarke-Stewart, Gruber, & Fitzgerald, 1994; Kontos, Hsu, & Dunn, 1994). Caregivers with more training tend to stimulate children’s cognitive and language development and have children with higher cognitive competence who display more complex cognitive play (Kontos, Hsu, & Dunn, 1994). When caregivers receive specialized training in facilitating language interactions, such interactions increase in frequency, which result in children’s accelerated language acquisition (Tennant, McNaughton, & Glynn, 1988).

The American Public Health Association and American Academy of Pediatrics in Caring for Our Children suggest that child care directors and caregivers should have at least 30 hours per year of continuing education in their first year of employment (16 hours in child development and 14 in safety, child health, and staff health). Each year thereafter, directors and staff should obtain 24 hours of training (16 in child development and eight in health). New staff should receive an orientation to the policies and procedures (including children’s needs, discipline, relating to parents, emergency procedures, basic hygiene practices, and child abuse) of the center. Within the first three months, they should also receive training in infection control procedures and daily health assessments.

Caregivers should receive training on sanitary procedures, the early assessment of certain illnesses, child development and developmental disabilities, general first aid, rescue breathing, and first aid choking (Lie, Runyan, Petridou, & Chang, 1994). Training should include sanitary procedures that reduce the spread of disease (e.g., staff and child hand washing, food preparation and service), which have been shown to reduce diarrheal illnesses. Three out of four child care centers report a need for more information on infectious diseases (OMara & Chambers, 1994). First aid training should be consistent with that of the American Red Cross, the American Heart Association, or the National Safety Council. It should be more child-focused than standard first aid courses (Lie, Runyan, Petridou, & Chang, 1994). Child care center staff should be trained to detect developmental disabilities and to make referrals for appropriate intervention (Parrino & Thacker, 1994).

Child care directors and staff should be trained to assess children’s daily health. Training in daily health assessments should include detection of signs and symptoms of common childhood diseases. If childhood professionals are trained to observe the signs and symptoms of various childhood diseases, they may be better able to enable infected children to seek professional medical help earlier and to limit the transmission of infectious disease (Morgan, Stevenson, Fiene, & Stephens, 1986).
Training programs should be practical and cumulative in nature (Kendrick, 1994) and should be structured to promote the acquisition and retention of information. Coherent, cumulative training programs appear to be more effective than single sessions that do not build upon one another (Copple, 1991). The most preferred forms of training are those that actively involve students in learning, such as small group discussions, demonstrations and modeling, role playing, games and simulation, observations of actual procedures, and video presentations (Kendrick, 1994). A mentoring model appears to be most effective. Changes in caregivers behavior are most often seen when the content of training is focused and meets a specific need, when handouts are disseminated for later reference, when the administration supports the training, and when a variety of training techniques are used. In contrast, caregivers may not learn much from training that consists of charts, research data, and foreign terminology. Changes in caregivers behavior are not as likely to be seen following training that is based on work sheets, panel discussion, and homework assignments.

Effective training conveys information in the same context in which caregivers work every day. Trainers must speak in the same language and be able to understand the day-to-day dilemmas faced by child care providers. Nurses are effective trainers of health and safety practices in child care centers (Peterson-Sweeney & Stevens, 1992; Ulione, 1997; Ulione & Donovan, 1996). Some professionals suggest that schools of nursing contract with child care centers to have nursing students gain clinical experience through implementing training programs for child care providers (Ulione, 1997).

An area for additional research involves the assessment of how staff monitor their own health care needs. This is critical given the lack of proper health care coverage for the majority of staff employed in child care. Training or mentoring programs and monitoring systems might be important additions in order to find out how this potentially very vulnerable group of individuals is dealing with their health needs. The accessibility and adequacy of child care training is an area that needs to be addressed in the research literature. Acknowledging the importance of staff training in these particular areas is one thing, but providing easy access to these trainings so that they are truly available and affordable is another issue.

**SUMMARY TABLE:**


Summary: Evaluated the impact of training and experience on the knowledge, beliefs, and practices of AmeriCorps child care volunteers in North Carolina. Found that Corps members completed successful training, but, after nine months of service, showed a decline in the appropriateness of their interactions with children.

Citation: Honig & Hirallal (1998), Which counts more for excellence in child care staff years in service, education level or early childhood education coursework?, *Early Child Development & Care*, 145, 31-46.

Summary: Observed 81 caregivers from 24 urban centers interacting with 3 and 5 year olds. Interactions were categorized into negative/positive, language facilitation, concept promotion, and care giving and cleaning up domains. When all positive teacher interactions were combined, found that early childhood education/child development course work accounted for over 62% of variance in teacher inputs.

Citation: Espinosa, Busch, Patterson (1998), Evaluation of an in-service model to train child care providers about inclusion, *Journal of Research in Childhood Education*, 12(2):130-42.
Summary: Home and center based child caregivers were randomly assigned to training and control groups. Caregivers who received training on inclusion attended group meetings and observed either live, or videotaped, on-site demonstrations. Caregivers who received training scored significantly higher on an observation scale and self-rating questionnaire than control caregivers, but there were no significant differences between video versus live training presentations.

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Citation: Miller & Stayton (1998), Blended interdisciplinary teacher preparation in early education and intervention, Topics in Early Childhood Special Education, 18(1):49-58.

Summary: A survey of 41 faculty explored interdisciplinary teacher preparation programs that blend personnel standards from early childhood special education and early childhood education. The benefits and barriers to interdisciplinary, blended programs are discussed, along with the many concerns among faculty who are members of interdisciplinary teams in these programs.

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Citation: Sumsion (1997), Early childhood teacher education programs, Early Child Development and Care, 129, 129-41.

Summary: This study addressed whether early childhood teacher education programs can effectively prepare graduates to work with children across the entire 0-8 years age span. Data from the students practicum suggested that generalist programs can offer effective preparation for entry into the early childhood teaching profession.

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Citation: Bloom (1996), The quality of work life in NAEYC accredited and non accredited early childhood programs, Early Education & Development, 7(4):301-7.

Summary: Compared work environments of NAEYC accredited and non accredited centers using the early childhood work environment survey. Found that innovativeness, goal consensus, opportunities for professional growth, and clarity accounted for the greatest differences between accredited and non accredited centers. Also found differences in staffs commitment, turnover, and teachers current and desired levels of decision making influence.

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Citation: Davis et al. (1996), Training determinants for quality infant child care, Early Child Development and Care, 124, 25-32.

Summary: Examined the associations among infant caregivers training and the quality of care they provide. Found through observation and rating of 50 caregivers that as infant caregiver training levels increased, so did mean scores on some dimensions of quality, such as personal care routines and learning activities.

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Citation: Haskell (1992), Using training as a means to improve the level of quality in child care facilities.
Summary: This practicum as designed to increase the quality of service in five day care centers in a metropolitan Florida county, as evidence by increase in the ECERS scores of early childhood teacher participants. A ten week teacher education program for five early childhood teachers was developed. Pre- and post-intervention ECERS scores were developed by observing the participants in their day care center classrooms. All five participants made significant improvements in their ECERS scores, especially in the areas of furnishings/displays and creative activities.

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Citation: Galinsky et al. (1995), The family child care training study, Families and Work Institute.

Summary: The family work institute conducted a study in San Francisco Valley, California; Dallas, Texas; and Charlotte, North Carolina, to examine the effects of child care aware family to family training program on 130 child care providers. These providers were compared to 112 regulated providers not participating in family to family training. Results show that 1) after training, children behaved in ways demonstrating that they are more securely attached to their providers; 2) training improved the overall quality scores of sites; 3) after training, 97% of providers reported increased their commitment to their jobs and began to seek out additional training; and 4) providers increased their involvement in family child care associations, the family child care community, and the child and adult care food program. Recommendations include the following: 1) increase provide and public investment in child care; 2) develop beginning, intermediate, and advanced family child care training; and 3) develop strategies for improving the quality of nonregulated providers.

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Citation: Whitebook et al. (1995), Mentoring in early care and education, National Center for the Early Childhood Work Force.

Summary: This report describes the nature of the mentoring relationship between mentors and protégés, the goals common to all mentoring programs, and some general principles that can serve to guide program development. The successes and barriers faced by seven mentoring programs are presented. Successes are related to the ability to provide relevant training to committed teachers and providers, and the chance to recognize mentors skills and commitment. Obstacles are centered around the availability of and access to resources. The last part of the report cites the need for a national early childhood mentoring alliance, resource materials for mentoring programs, a program developers network, and a mentor network.

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Citation: Fiene (1993), Pennsylvania early childhood/child care training system model, EDRS ED350080.

Summary: A multi-dimensional training program is being implemented in Pennsylvania to improve the quality of early childhood and child care programs. Training opportunities are provided for early childhood program and day care center staff, group and family home day care providers, and unregulated child care providers. The overall training plan is designed to offer a variety of training options and topics so staff can choose those most closely suited to their level of knowledge and experience. Training covers developmentally appropriate practice; health and safety; separation and loss; emergent literacy; intergenerational programming; observation and evaluation skills; administration of early childhood and child care programs; childrens literature; use of community resources; working with parents; discipline; growth-promoting relationships; and interpersonal skills.
Summary: This paper discusses the need for child care for infants and toddlers with disabilities and chronic illnesses; types of child care; shortage of and need for specially trained caregivers; influence of federal programs; the importance of family involvement; and a program providing preservice training to caregivers in public and private child care facilities, called First Start.

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Citation: Shirah et al. (1993), Preservice Training Fosters Retention: The Case for Vocational Training, Young Children, (48)4:27-31.

Summary: The lack of adequate training contributes to a high turnover rate among child care employees. A training program developed by the University of South Alabama reduced turnover in the Mobile, Alabama, area. Among caregivers who received training, 68% were still employed in the field one year after graduation.

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Citation: Palmerus, & Pramling (1995), Increasing the Competence of Staff Dealing with Young Children.

Summary: This paper reports on a study designed to increase the psychological and educational knowledge of day care staff and develop content and methods appropriate for toddlers in day care settings. Preschool teachers and nursery nurses in three day care centers participated. They were interviewed at the beginning of the study, and 19 months later at the study's end. The interviews dealt with their experience of working with toddlers, expectations for the project, knowledge of child development, work as caregivers and educators, and attitudes toward work. At the beginning of the study, subjects attended a one-week course that covered theories and knowledge about child development and information about the Swedish preschool program. Mediated Learning Experiences (MLE), an intervention program based on adult mediation between the child's experiences and the surrounding environment, was implemented. Every four weeks, interactions between children and staff were videotaped and analyzed. Results indicated that MLE, and the teaching and guidance of the staff, increased the staff's capacity to interact in a stimulating way with children. The interviews indicated changes in staff attitudes about the education of toddlers. Viewings of the videotapes enabled staff members to understand their own behavior and increased their ability to individualize and to take the viewpoint of the toddler.

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Citation: Eggbeer & Pratt, Establishing statewide systems of inservice training for infant and family personnel, Infants & Young Children, 5(3):49-56.

Summary: In accordance with Part H of the Individuals with Disabilities Education Act (IDEA), states are required to ensure that all professionals and paraprofessionals serving infants, toddlers, and their families are adequately trained. This article discusses the experience of two states -- Massachusetts and Hawaii -- in establishing statewide, inservice training programs for personnel serving children under the age of 3 years and their families. It also relates their efforts to the work of ZERO TO THREE/National Center for Clinical Infant Programs (NCCIP) Training Approaches for Skills and Knowledge (TASK) project, in which professionals from both states participated.

Summary: As part of the Cost, Quality, and Outcomes Study, child and family characteristics were tested to see whether they moderated the relation between center-based child care quality and preschool children's concurrent cognitive and socioemotional development. Analyses included a multisite sample of 170 child-care centers of varying quality and 757 children (mean age 4.3 yrs). Results provide further evidence that there is a positive relation between child-care quality (both observed classroom practices and teacher ratings of teacher-child closeness) and children's cognitive and socioemotional outcomes. Moderating influences of family characteristics were observed for some outcomes, indicating stronger positive effects of child-care quality for children from more at-risk backgrounds. Further, there was no evidence that children from more advantaged families were buffered from the effects of poor-quality care.

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Summary: Examined 718 infants (aged 11-17.9 mo), toddlers (aged 18-35.9 mo), and preschoolers (aged 36-61.7 mo), who were enrolled in 120 child-care centers from Massachusetts, Virginia, and Georgia, to determine the effects of quality of care on children's social outcomes. Four auspices of child-care centers were sampled: nonprofit, local for-profit, national chains for-profit, and church-sponsored. Social outcomes included mothers' ratings of attachment, observations of social skills in classroom, and parents' rating of behavior problems. Quality of care assessment was based on teacher characteristics, teacher:child ratio, and teacher-child interactions. In addition, child developmental patterns and family characteristics, such as work-family interference and family stress, were tested. Results show that there were few associations between teacher-child interaction and children's social outcomes. Higher work-family interference was associated with poorer social outcomes generally. Children in nonprofit centers had better social outcomes on some measures, although effects were small.

ADDITIONAL RESOURCES:

The Center for Career Development in Early Care and Education Wheelock College 200 The Riverway Boston, MA 02215 617-734-5200 x2211http://ericps.ed.uiuc.edu/ccdece/ccdece.html

Healthy Child Care America American Academy of Pediatrics (AAP) 141 Northwest Point Boulevard Elk Grove Village, IL 60007-1098 Contact HCCA Program Manager, American Academy of Pediatrics, for information on potential state training linkages: 888-227-5409 or email childcare@aap.org http://www.aap.org/

National Association for the Education of Young Children (NAEYC) 1509 16th Street, NW Washington DC 20036 1-800-424-2460 http://www.naeyc.org

The National Association of Child Care Resource and Referral Agencies (NACCRA) 1319 F. Street, NW Suite 500 Washington, DC 20004-1106 Phone: 202-393-5501http://www.naccra.net/

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These standards are based on state regulations that deal with general supervision, discipline, and in some cases, basic programming related to developmentally appropriate practices. Characteristic of state regulations, the supervision and discipline aspects are emphasized rather than the developmental program aspects. Eight standards are listed for this indicator.

**CFOC STANDARDS (1992):**

AD 009: Each facility's supervision policy shall specify a) That no child shall be left alone or unsupervised while under the care of the child care staff. Caregivers shall supervise children at all times, even when the children are sleeping (a caregiver must be able to both see and hear infants while they are sleeping). Caregivers shall not be on one floor while children are on another floor. School-age children shall be permitted to participate in activities and visit friends off premises as approved by their parents and by the caregiver(s) b) That developmentally appropriate child:staff ratios shall be met during all hours of operating, including field trips. The policy shall include specific procedures governing supervision of the indoor and outdoor play spaces that describe the child:staff ratio, precautions to be followed for specific areas and equipment, and staff assignments for high-risk areas. The supervision policies of centers and large family-child-care homes shall be written policies.

PR 028: Facilities shall maintain supervision of children at all times as specified in Supervision Policy (AD 009).

PR 031: Discipline shall include positive guidance, redirection, and the setting of clear-cut limits that foster the child's ability to become self-disciplined. Disciplinary measures shall be clear and understandable to the child, shall be consistent, and shall be explained to the child before and at the time of any disciplinary action.

PR 032: Caregivers shall guide the child to develop self-control and orderly conduct in his/her relationships with peers and adults. Caregivers shall show children positive alternatives rather than just telling children "no." Good behavior shall be rewarded. Caregivers shall work with children without recourse to physical punishment or abusive language.

PR 033: The facility shall use the teaching method described in standard PR 032 immediately when it is important to show that aggressive physical behavior toward staff or children is unacceptable. Caregivers shall intervene immediately when children become physically aggressive.

PR 034: Disciplinary practices established by the facility shall be designed to encourage the child to be fair, to respect property, and to assume personal responsibility and responsibility for others.

PR 035: The following behavior shall be prohibited in all child care settings and by all caregivers:

1. Corporal punishment, including hitting, spanking, beating, shaking, pinching, and other measures that produce physical pain.
2. Withdrawal or the threat of withdrawal of food, rest, or bathroom opportunities.
3. Abusive or profane language.
4. Any form of public or private humiliation, including threats of physical punishment.
5. Any form of emotional abuse, including rejecting, terrorizing, ignoring, isolating, or corrupting a child.

PR 036: Children shall not be physically restrained except as necessary to ensure their own safety or that of others, and then only for as long as is necessary for control of the situation. Children shall not be given medicines or drugs that will affect their behavior except as prescribed by their health care provider and with specific written instructions from their health care provider for the use of the medicine.
PR 037: “Time out” that enables the child to regain control of himself or herself and that keeps the child in visual contact with a caregiver shall be used selectively, taking into account the child’s developmental stage and the usefulness of “time out” for the particular child.

RESEARCH REVIEW/GAP ANALYSIS:

Supervision and discipline of children are clearly intertwined in the research literature (Gross et al., 1999; Arnold et al., 1998). Proper supervision can lessen certain behavioral problems and has a direct impact on injury rates with young children (Wills et al., 1997). Supervision varies with children’s age, self-help skills, and activity. The influence of child care teachers’ lax and over-reactive discipline on children’s behavior problems was examined in a study (Arnold et al., 1998) in which teachers’ laxness strongly influenced child misbehavior, and child misbehavior influenced both teachers’ over-reactivity and laxness. Teachers’ over-reactivity did not influence child misbehavior. Caregivers who attribute misbehaviors to factors internal to the child and controllable by the child responded to the misbehaviors with more power-assertive discipline strategies than did caregivers who offered external or uncontrollable attributions (Scott-Little & Holloway, 1992). Encouraging caregivers to reflect on why children misbehave could influence their responses to children’s misbehaviors. In particular, teacher education could be directed toward increasing the salience of environmental factors as an explanation for misbehaviors (Scott-Little & Holloway, 1992).

Most injuries occur to children in unsupervised group situations (Wills et al, 1997). This research suggests that the occurrence of physical injury may be associated with peer presence as well as with lack of supervision, and that having a supervisor present does not guarantee protection from injury. The association between the supervisors’ age and peer presence may be important for interpreting future findings about injury risk. The age of directors has dropped in recent years, which causes concern that children may be at greater risk in programs with younger, less experienced staff.

Noncompliance in preschool children is a common problem in child care and results in increased controlling behaviors by caregivers, which is the most frequent complaint of parents of children referred to clinics for treatment of behavior problems. Noncompliance also underlies, or is associated with, a number of other childhood disorders and appears to be a significant predictor of maladjustment later in life. A study (MacKenzie-Keating et al., 1996) showed that the mean rate of compliant behavior for preschool children in child care centers was 84%. Overall compliance increased with age from 2 years to 4 years of age. Children were more responsive to direct requests than to indirect or group requests. Overall, girls were not significantly more compliant than boys, regardless of age or type of request. Teachers delivered more direct requests than either group or indirect requests. Having teachers focus on these cues might help teachers meet the individual needs of children more effectively. This is an area that needs additional research.

Another major concern with discipline is the misinterpretation of punishment as discipline and the resultant negative effects of verbal reprimands and corporal punishment. Many parents, for example, use disapproving verbal statements as a form of punishment to alter undesirable behaviors. If used frequently and indiscriminately, verbal reprimands lose their effectiveness and become reinforcers of undesired behavior. Corporal punishment, especially spanking, is equally less effective as a strategy to eliminate undesired behavior. For example, spanking children under 18 months of age increases the chance of physical injury and the child is unlikely to understand the connection between the behavior and the punishment. Although spanking may result in a reaction of shock by the child and cessation of the undesired behavior, repeated spanking may result in agitated, aggressive behavior in the child that may lead to a physical altercation between parent and child. Spanking models aggressive behavior as a solution to conflict and has been associated with increased aggression in preschool and school children (American Academy of Pediatrics, 1998). Corporal punishment and frequent and indiscriminate verbal reprimands should never occur in any child care setting.
SUMMARY TABLE:


Summary: The purposes of this study were to describe: (a) the frequency and correlates of behavior problems among a sample of 2- and 3-year-old children from low-income families as seen by their parents and day care teachers, (b) the degree to which parents and teachers agree about the children's behavior problems in their respective contexts, and (c) family characteristics that distinguish toddlers with behavior problems both at home and at day care from the rest of the sample. Parents of 133 toddlers from ten Chicago day care centers completed measures of child behavior problems, child behavioral intensity, parenting self-efficacy, discipline strategies, and stress. Children's day care teachers also completed a measure of child behavior problems. Parent-reported behavior problems were associated with higher child behavioral intensity, greater parent stress, lower self-efficacy, and discipline strategies characterized by irritability, coercion, and inconsistency. Parent and teacher ratings on child behavior were correlated for boys' behavior problems only. Parents reported more child behavior problems than teachers. Approximately 8% of the children were rated as having behavior problems at home and at day care. Although most of the children are functioning well, many of these parents and toddlers are engaged in highly stressful and coercive relationships.

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Citation: Arnold, McWilliams, & Arnold (1998), Teacher discipline and child misbehavior in day care: untangling causality with correlational data, *Developmental Psychology*, 34(2):276-87.

Summary: Day-care centers provide an ideal, underused setting for studying the developmental processes of child psychopathology. The influence of day-care teachers' lax and over-reactive discipline on children's behavior problems was examined, as was the influence of children's behavior problems on teachers' discipline. Participants were 145 children and 16 day-care teachers from eight classrooms in a day-care center for children from low-income families. Two techniques are presented for estimating causal relations based on correlational data gathered from day-care centers: 2-stage least squares and simultaneous structural equation modeling. Across techniques, teachers' laxness strongly influenced child misbehavior, and child misbehavior influenced both teachers' over-reactivity and laxness. Teachers' over-reactivity did not influence child misbehavior.

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Citation: Wills et al. (1997), Supervision in childhood injury cases: a reliable taxonomy, *Accident Analysis & Prevention*, 29(1):133-7.

Summary: This paper describes the development of the "Chicago Children's Supervision Taxonomy" which operationally defines supervision based on the age of an injured child and the ages, familiarity, and proximity of that child's companions. The reliability, coverage, and utility of this taxonomy are illustrated by its application to 142 cases of urban childhood pedestrian injury. All cases were unambiguously classified with good interrater reliability. Most injured children were in unsupervised groups (42%) but 36% had supervisors nearby, thus, supervisor presence does not guarantee protection. Supervising more than one child (especially likely when the supervisor was a teenager) may increase injury risk compared with one-to-one supervision. The taxonomy provides a needed framework adaptable for describing direct supervision in most child injury situations and can facilitate studies of more complex aspects of supervision.

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Citation: Wills et al. (1997), Patterns and correlates of supervision in child pedestrian injury, *Journal of Pediatric Psychology*, 22(1):89-104.

Summary: Described supervision in 142 child pedestrian injuries (PI), based on presence and proximity of supervisors and/or peers. Children (5-12 years), families, sites, and PI events were described via record reviews, interviews, questionnaires, and site investigation. Supervision of PI victims varied with family size and cohesion, and with children's age, self-help skills, nearness to home, and activity (playing or journey). Peer presence was associated with more impulsive behavior among supervised (but not among unsupervised) PI victims. Definitions of supervision parameters offered here can aid research on the complex relationship between supervision and PI risk.

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Citation: Arnold et al. (1998), Teacher Discipline and Child Misbehavior in Day Care: Untangling Causality with Correlational Data, *Developmental Psychology*, 34(2):276-87.

Summary: Used least squares analysis and simultaneous structural equation modeling to examine the bi-directional relationship between day-care teachers' lax, over reactive discipline and young children's behavior problems. Found that teachers' laxness strongly influenced child misbehavior and child misbehavior influenced teachers' over reactivity and laxness. Teachers' over-reactivity did not influence child misbehavior.

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Citation: Watson (1995), *Behaviour Management in Context*.

Summary: Based upon the belief that what children learn from adult responses to their early behavior sets the foundations on which they will build all future learning, this publication provides information for teachers on the appropriate guidance and management of children's behavior in early childhood settings using a contextual approach. Issues discussed in the document include: 1) setting a behavior policy for the institution; 2) building positive relationships with children; 3) using a knowledge of child development to create appropriate expectations for behavior; 4) considering developmental issues in responding to children's behavior; 5) understanding the impact of changes and loss on children's behavior; 6) examining the variety of family lifestyle issues, such as family routines, living situations, and family tensions; 7) identifying the effects of sociocultural backgrounds on children's behavior, including Aboriginal and Torres Strait Island children; 8) understanding the personal characteristics of each child; 9) realizing the impact of various chronic or acute illness on children's behavior; 10) dealing with children's aggression; 11) creating behavior-friendly classroom environments; 12) developing a plan when behavior problems arise; 13) working with parents; 14) responding to particular behavior problems, such as out of control feelings, emotional stress, regression, and separation anxiety; 15) talking to a child when there is a problem; and 16) using a checklist to identify and evaluate possible strategies for guiding children's behavior.

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Citation: MacKenzie-Keating et al. (1996), Natural Rates of Compliant Behavior in Preschool Children in Day Care Settings, *Early Child Development & Care*, 124, 91-103.

Summary: Collected data on natural rates of compliance of preschool children in day care centers. Found a mean rate of 84%. Also found that overall compliance increased with age, that children were more compliant to direct requests (of which teachers gave more) than to indirect or group requests, and that girls were not significantly more compliant than boys.
Citation: Couchenour (1994), Bright Ideas: Learning All Day. Curriculum for Infants and Toddlers.

Summary: Using as a framework concerns and problems which two early childhood educators encountered in connection with curriculum in programs for infants and toddlers, this guide focuses on common questions about child developmental needs shared by caregivers and parents. The chapters consider the following questions: 1) “What Is Curriculum?” attempts to come up with a working definition of curriculum for infants and toddlers; 2) “What Kind of Curriculum Should We Use?” asserts that play is the primary teaching method; 3) “What Will the Children Learn?” includes a discussion of physical-motor development, cognitive and language development, and social and emotional development; 4) “What Kinds of Discipline Will We Use?”; and 5) “How Do We Measure the Child's Development?” includes running records, time samples, developmental checklists, and formal measures. A reproducible letter to parents concerning parent participation and understanding of the child care program is included, as is a list of nine teacher resources.

Citation: Robinson (1996), Aggressive Behavior in the Pre-Verbal Child.

Summary: Directors, teachers, parents, and mental health professionals in child care centers were interviewed about aggressive behavior of pre-verbal children to determine the caregivers' level of understanding about children's emotional development. The definition of aggressive behavior included hitting, biting, pushing, scratching, pinching, grabbing, tantrums, whining or screaming, pulling hair, walking on another child, and running into people. Hitting, biting, and pushing were the mostly commonly observed problems. Ways that aggressive behaviors were handled by the centers were analyzed in terms of intervention techniques, center rules and procedures, and parent roles. The various approaches illustrated helplessness toward and misunderstanding of children's emotions. It was concluded that caregivers need more knowledge of children's emotional development. Commentary is offered about the intervention strategies employed, and examples are given to show the extent of parent anger, guilt, and stress over handling aggressive children. An eight-point plan is suggested for centers to use when confronted with aggressive behavior. The plan includes adapting the curriculum, recognizing the value of calm adult reactions, taking care of both victims and aggressors, keeping logs of behavioral problems, and establishing a cooperative relationship between the center and the parent.

Citation: Kuhns et al. (1992), Mothers' and Child-Care Providers' Cognitive, Affective, and Behavioral Responses to Children's Misbehavior, Early Education & Development, (3)3:232-43.

Summary: Mothers and caregivers responded to hypothetical incidents in which a four-year-old child misbehaved. Mothers and caregivers differed in their causal attributions for children's misbehavior and their affective and behavioral responses to children's failures to be altruistic. Assertions of power were likely when respondents believed misbehavior was caused by stable personality factors.

Citation: Scott-Little, & Holloway (1992), Child care providers' reasoning about misbehaviors: Relation to classroom control strategies and professional training, Early Childhood Research Quarterly, 7(4):595-606.
Summary: Explored the relationship between causal explanations or attributions caregivers form regarding aggressive and rebellious behaviors in their classrooms and their behavioral responses to the misbehaviors. Forty female caregivers (aged 21-54 yrs) were observed during classroom activities, and details about caregiver responses to two instances of child misbehavior were noted. Subsequent to the observation period, caregivers were asked to indicate why they thought a child had misbehaved. Attributions were coded along dimensions of locus of causality, controllability by the child, and stability over time. Caregivers who attributed misbehaviors to factors internal to the child and controllable by the child responded to the misbehaviors with more power-assertive discipline strategies than did caregivers who offered external or uncontrollable attributions.


Summary: One hundred and forty first-born Swedish children (aged 11-24 months) were observed with their mothers in two situations (a problem-solving task and a clean-up session). Individual differences in their behavior were then related to measures of the quality of care received by them both at home and in alternative care settings when they averaged 16, 28, and 40 months of age; the amount of social support reportedly received by the mother; the children's ages; and the amount of early out-of-home care received. Analyses show that subjects were more compliant in the task situation at 40 months when they had experienced high quality care at home, when they were older, and when they had experienced less out-of-home care before 24 months of age.

ADDITIONAL RESOURCES:

American Academy of Pediatrics (AAP) 141 Northwest Point Boulevard Elk Grove Village, IL 60007-1098 Phone: 847-228-5005 Fax: 847-228-5097 http://www.aap.org/

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FIRE DRILLS INDICATOR

This indicator had a relatively direct crosswalk between state regulations and CFOC standards. Most state regulations did not vary much with this indicator and that was reflected in the national database. Five standards are representative of this indicator.

CFOC STANDARDS (1992):

AD 031: The facility shall have a written plan for reporting and evacuating in case of fire, flood, tornado, earthquake, hurricane, blizzard, power failure, or other disaster that could create structural damages to the facility or pose health hazards. The facility shall also include procedures for staff training on this emergency plan.

AD 032: Evacuation drills shall be practiced as follows in areas where natural disasters occur: for tornadoes, on a monthly basis in tornado season; for earthquakes, every 6 months; and for hurricanes, annually.

AD 033: The center director shall use a daily class roster in checking the evacuation and return to a safe indoor space of all children in attendance during an evacuation drill. Small and large family home caregivers shall count to be sure that all children are safely evacuated and returned to a safe indoor space during an evacuation drill.
AD 034: A fire evacuation procedure shall be approved by a fire inspector and shall be practiced at least monthly from all exit locations at varied times of the day and during varied activities, including naptime.

AD 035: A fire evacuation procedure shall be maintained by the caregiver and practiced at least monthly from all exit locations at varied times of the day and during varied activities, including naptime.

RESEARCH REVIEW/GAP ANALYSIS:

Children under the age of 5 are 2.5 times more likely to die from fire than any other childhood age group. The vast majority of fire-related deaths occur in family residences, with the majority in one- and two-family dwellings. Unfortunately, not many recent empirical demonstrations or evaluations of fire-safety programs for preschool children exist. A program called Kid Safe was particularly successful. In this program, preschool children showed significantly greater knowledge gains from pre-test to post-test than did children who did not receive the program. Three-year-olds showed the greatest change of any age group. This program provides support for the value of training preschool children in fire safety as an important strategy for injury prevention in this age group. This is an area that needs additional research and program development.

The Kid Safe program is a 30-hour program with daily 20-minute sessions covering nine lessons presented over an 18-week period. Separate lessons teach children about hot and cold items, the use of matches and lighters, the proper procedure if clothing catches on fire, the difference between good fires and bad fires, the importance of smoke detectors, safe departure from a burning house, how to cool burns, and the role of the firefighter as a community helper. Much of the program emphasizes cognitive aspects of fire safety such as situations to avoid, things not to play with, etc. Other portions use behavioral techniques (such as modeling, role playing, and rehearsal during simulated emergency situations) to instruct children in specific behavior sequences, such as Stop, Drop, and Roll when their clothes catch on fire, or when there is smoke, Crawl Low.

SUMMARY TABLE:


Summary: The purpose of this study was to evaluate Children's Village, a life safety education facility for children. The study took place in Washington County, Maryland, a rural county. Eight elementary schools with 20 second grade classrooms (410 students aged 7 and 8) were selected to participate. Using a quasi-experimental design, tests were administered to two cohorts of children before (pre-test) and after (post-test) they attended the Children's Village during 1993-1994. Parent and teacher surveys were also completed after the program. Among children who attended in December 1993-January 1994, there was a significant improvement in average test scores between the pretest (58% correct) and post-test (78%). Among children who attended in April 1994, there also was a significant improvement in test scores between pretest (74%) and post-test (85%). Among parents, 70% reported that their child learned a great deal at Children's Village and 33% reported having made changes in their home as a result. The parent survey also revealed that 25% of children and 35% of adults did not always wear their seat belts, and 74% of children did not always wear bicycle helmets. Teachers' responses to the program were generally positive. Children's Village brought together an extensive network of community leaders, parents, and teachers dedicated to safety education of children. The curriculum had a positive impact on children's knowledge and, to a lesser extent, on parents' safety practices. Program impact could be enhanced by more emphasis on automobile restraints and helmets (behaviors that parents reported were not consistently practiced) and by expanding the village services to parents as well as children. Others considering creating similar programs need to identify community leaders willing to commit the time, effort, and resources required to develop and sustain such programs.
Citation: English, & Hendricks (1997), Learn Not To Burn, Children & Families, 16(2):40-41.

Summary: Describes the "Learn Not to Burn Preschool Program," a low-cost fire safety awareness and burn prevention curriculum for young children. The program promotes eight burn prevention methods--including practicing an escape plan--using developmentally appropriate learning objectives to increase children's fire safety knowledge, skill, and understanding. Evaluation data suggest that participating Head Start children increased their fire-safety skills.


Summary: Described an empirical evaluation of a fire-safety program for preschool children ages 3, 4 and 5 years. Four hundred and forty-three subjects from ten child-care facilities participated. Children in six centers received an 18-week training program called Kid Safe. Children in four other centers were assigned to the delayed-treatment condition and constituted the comparison group. All subjects were pretested with a modified 48-question multiple choice comprehensive fire-knowledge test. The same test was re-administered to all subjects following presentation of the program to the treatment group. At each of the three ages, subjects in the treatment group showed significantly greater knowledge gains from pre-test to post-test than did subjects in the comparison group. Three year olds showed the greatest change of any age group. Findings provide support for the value of training preschool children in fire safety as an important strategy for injury prevention in this age group.


Summary: Discusses the integration of deaf and hard-of-hearing (HOH) children in the preschool environment. The authors suggest that a quality early childhood program can be successfully expanded to accommodate deaf, HOH, and hearing children with in-service training and the addition of staff who can communicate with the deaf and HOH children, and with additional physical and visual modifications. Recommended modifications to aspects of the environment include increased visual stimulation, safe physical layout, deaf/HOH staff and trained hearing staff to work with deaf and HOH children, an appropriate communication milieu, cultural sensitivity, knowledge of applicable laws, sign language training, and appropriate curriculum activities. Safety concerns should also be considered, especially for fire drills and alarms and for playground procedures.

ADDITIONAL RESOURCE:

National Fire Protection Association (NFPA) 1 Batterymarch Park Quincy, MA 02269-9101 617-770-3000http://www.nfpa.org

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State regulations for this indicator were very specific and cross walked clearly to the seven standards listed here. Exact wording was not present in doing the crosswalk but the essence of the regulations is captured in these CFOC standards.

**CFOC STANDARDS (1992):**

HP 082: The administration of medicines at the facility shall be limited to: a) Those prescribed medications ordered by a health care provider for a specific child. b) Those nonprescription medications recommended by a health care provider for a specific child, with written permission of the parent or legal guardian referencing a written or telephone instruction received by the facility from the health care provider.

HP 083: Any prescribed medication brought into the facility by the parent, legal guardian, or responsible relative of a child shall be dated, and shall be kept in the original container labeled by a pharmacist with the child's first and last names; the date the prescription was filled; the name of the health care provider who wrote the prescription; the medication's expiration date; and specific, legible instructions for administration, storage, and disposal (i.e., the manufacturer's instructions or prescription label).

HP 084: Any over-the-counter medication brought into the facility for use by a specific child shall be labeled with the following information: the date; the child's first and last names; specific, legible instructions for administration and storage (i.e., manufacturer's instructions); and the name of the health care provider who made the recommendation.

HP 085: All medications, refrigerated or unrefrigerated, shall have child protective caps, shall be kept in an orderly fashion, shall be stored away from food at the proper temperature, and shall be inaccessible to children. Medication shall not be used beyond the date of expiration.

HP 086: There shall be a written policy for the use of any commonly used, nonprescription medication as specified in Medication Policy.

HP 087: Any caregiver who administers medication shall be trained to check for the name of the child, to read the label/prescription directions in relation to the measured dose, frequency, and other circumstances relative to administration (e.g., relation to meals); and to document properly that the medication was administered.

**RESEARCH REVIEW/GAP ANALYSIS:**

According to the Centers for Disease Control and Prevention, children in child care are 18 times more likely to acquire an infectious disease than children who are not. Group child care is perfect for spreading infectious organisms rapidly, not only the common cold and flu, but also Salmonella, the agents that cause meningitis, and even hepatitis viruses. According to the National Standards for Health and Safety *Caring for Our Children*, children with meningitis and Hepatitis A should be permitted to attend if prophylaxis has begun. Children with Hepatitis B or C should be permitted to attend if staff observe standard precautions.

Children in child care are more likely to be taking medication—both over-the-counter preparations and prescription drugs (decongestants, expectorants, antihistamines, antibiotics, and inhalers) because of this increased risk of acquiring an infectious disease. Child care staff are often obligated to administer a variety of medications, often at inconvenient times, to a number of children (Moser, 1995).

Over-the-counter medications should be used in child care only with written permission of the parent or guardian and instructions from a physician. Because use of any medication in child care puts an increased burden on providers, parents should ask their physicians to modify dose schedules to avoid the hours that children are in child care.
The National Health and Safety Performance Standards, National Academy of Early Childhood Programs accreditation criteria, Head Start Performance Standards, and state licensing requirements specifically address administration of medicines in child care programs. It is essential that every child care program have a written policy and clear procedures on giving medicines. Delegation in medication administration is another key area that needs additional research to determine the impact of training programs in the actual administration of medications. The key to medication administration is the three-way collaborative alliance of the child care provider, a medical professional, and the parents.

In addition to the steps mentioned above, the several things can be done to assist in the administration of medication. Medicines must be stored in original, labeled containers in locked cabinets inaccessible to children. Parents should take home any medicines at the end of the day or end of the week. Each center should have designated staff members who are trained and authorized to give medicines. This indicator needs additional research to help fill in some of the gaps that presently exist in determining if training programs are truly effective with staff.

SUMMARY TABLE:


Summary: This paper reports on medication use and factors affecting use in a cohort of preschool children attending long (seven hrs+) day care in centers and family day care in homes. A survey of parents representing 846 children under 6 years old in two types of childcare in Perth, Western Australia. The data were analyzed using descriptive and logistic regression techniques to elucidate factors associated with use of medication. Seventy-three per cent of the children were reported to have used over-the-counter medication at some time, while current regular use of prescribed medication was 11%. This proportion is comparable to the limited available data for children of similar ages in Western Australia. For both medication categories, the use of medication was higher in long day care than family day care. In addition, many other characteristics differed between children in long day care and family day care. Initial analysis showed a number of significant associations between child and family factors and both categories of medication. Multivariable analyses indicated that the most important associations with medication use were with children's illnesses. There was no significant difference between long day care and family day care for use of over-the-counter medication but attending long day care was significantly associated with increased use of prescribed medication (OR=2.13; 95% CI 1.24-3.67) after illnesses had been taken into account. Medication use in children attending childcare is closely related to reported illness in the child.

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Citation: Hale, & Polder (1995), The ABCs of Safe and Healthy Child Care: A Handbook for Child Care Providers.

Summary: Recognizing the importance of maintaining a safe and healthy child care setting, this manual for home or center child care providers contains information and guidelines to help providers maintain child health and reduce sickness and injuries. Part 1, "Introduction," describes how diseases are spread and how to prevent and prepare for unintentional and intentional injuries, and provides guidelines for recognizing child abuse. Part 2 of the guide, "Establishing Policies to Promote Health and Safety," makes recommendations for developing written policies for health history and immunizations for day care children and care providers, exclusion for illness, incident reporting, emergency illness or injury procedures, children with special needs, medication administration, nutrition/foods brought from home, as well as smoking and the use of alcohol and illegal drugs. Part 3, "Following Protective Practices to Reduce Disease and Injury," describes basic disease and injury protection practices, including stress reduction,
handwashing and diapering routines, use of toilet training equipment, cleaning and disinfecting routines, use and handling of toothbrushes, and food safety and sanitation. Part 4, "Maintaining a Safe and Healthy Facility," details the contents of a written safety plan, including precautions, evaluation plan and drills pertaining to fire safety, electrical fixtures and outlets, stairways and walkways, indoor furnishings and equipment, outdoor play areas, small objects and toys, firearms, water temperatures, chemical toxins, lead poisoning, air pollution, pets, and exposure to electric and magnetic fields and to heat and ultraviolet rays. Part 5, "Fact Sheets on Childhood Diseases and Conditions," lists a variety of sicknesses and diseases, from asthma and the common cold to yeast infections, and gives the child care provider a general diagnostic description, as well as preventive measures for the illness. Appendices contain additional resources and contact information on regional poison control centers.

Citation: Aronson (1991), Ask Dr. Sue, Child Care Information Exchange, 77, 24-25.

Summary: Answers child care center directors' questions concerning the use of the Haemophilus influenza type b (Hib) vaccine and use of over-the-counter medication with children in child care.

ADDITIONAL RESOURCE:

American Academy of Pediatrics 141 Northwest Point Boulevard Elk Grove Village, IL 60007-1098 Phone: 847-228-5005 Fax: 847-228-5097 http://www.aap.org/

EMERGENCY PLAN/CONTACT INDICATOR

This indicator had only the one CFOC standard that represented the states regulations regarding emergency plans and contact information related to that emergency plan.

CFOC STANDARDS (1992):

APP 28The facility shall have a written plan for reporting and managing any incident or unusual occurrence that is threatening to the health, safety, or welfare of the children or staff. The facility shall also include procedures for staff training on this emergency plan. The following incidents, at a minimum, shall be addressed in the emergency plan: a) lost or missing child; b) sexual or physical abuse or neglect of a child; c) injuries requiring medical or dental care; d) serious illness requiring hospitalization, death of a child enrolled in the facility, or death of a caregiver, including deaths that occur outside of child care hours. The following procedures, at a minimum, shall be addressed in the emergency plan: e) provision for a caregiver to accompany a child to the emergency care source and remain with the child until the parent or legal guardian assumes responsibility for the child. Provision for a backup caregiver or substitute for large and small family child care homes to make this feasible. Child:staff ratios must be maintained at the facility during the emergency; f) the source of emergency medical carea hospital emergency room, clinic, or other constantly staffed facility known to caregivers and acceptable to parents; g) ensure that first aid kits are resupplied following each first aid incident, and that required contents are maintained in a serviceable condition, by a periodic review of the contents; h) the names and addresses of a least three licensed providers of dental services who have agreed to accept emergency dental referrals of children and to give advice regarding a dental emergency.

RESEARCH REVIEW/GAP ANALYSIS:
Quality child care must take place in safe and healthy settings. Because no environment can be absolutely safe, all staff must be prepared to handle medical emergencies and to use the appropriate emergency medical services (Wiebe & Fuchs, 1999). Staff need to be prepared for emergency situations and injuries, medical emergencies, and need to have emergency medical policies and procedures in place. All child care staff that provide direct care must have training in pediatric first aid, including rescue breathing and first aid for choking. At least one certified staff person should be with the children in care at all times and in all places. Additional research is needed to determine the effectiveness of training programs related to emergency contacts and planning. However, clear indicators of the types of information that child care programs should have readily available at all times are available.

Responding appropriately means preparing adequately through training, practice, and access to necessary information. Certain critical information should be gathered on all children and staff and readily available in an organized, easy-to-use file. Because information often changes, data on each child should be regularly updated. Examples of critical information include: accurate and current contract names and phone numbers, names and phone numbers of medical providers, preferred hospitals, copies of current insurance or Medicaid cards, parent/guardian signatures authorizing emergency care, and information on allergies or chronic health conditions. Emergency phone numbers, resources, and other information should be posted in a highly visible place, such as near the door. Emergency phone numbers and program addresses should be posted by the telephone. Location of the nearest phone, emergency assistance numbers, address of the child care program, name of caregiver, location of fire extinguishers, location of the first aid kit, child abuse hotline numbers, and basic first aid information should also be posted. However, even with all these resources in place, this indicator requires additional research to determine if training in these areas is really effective.

**SUMMARY TABLE:**

Citation: Copeland (1996), Code Blue! Establishing a Child Care Emergency Plan, *Child Care Information Exchange*, 107, 17-22.

Summary: Discusses steps necessary to develop an emergency preparedness plan for child care centers: (1) identifying the need for policies through brainstorming and reviewing previous emergencies; (2) identifying potential issues through consultation; (3) establishing center procedures; (4) identifying a spokesperson to present accurate public information; (5) preparing statements to prevent misinformation; and (6) preparing for ongoing support after the emergency.

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Citation: Levin (1991), Your Center Needs an Emergency/Crisis Plan!, *Child Care Information Exchange*, 79, 34-37.

Summary: Describes the development of a five-part plan for dealing with emergencies and crises in day care centers. The plan involves a handout that provides general information about the program, the designation of spokespeople, procedures for responding to both common and extreme emergencies, and media guidelines.

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Summary: The purpose of this study was to identify and characterize caretakers who fail to utilize the poison center for unintentional poisonings involving children. The authors interviewed 210 caretakers of children evaluated for unintentional poisoning in the emergency center of an urban, university-based teaching hospital to determine 1)
whether demographic differences exist between those caretakers who contacted a poison center prior to the emergency center visit and those who did not and 2) whether differences exist in prevalence of poison prevention knowledge and behaviors between the two groups. Ninety-six (46%) of caretakers did not contact the poison center prior to the emergency center visit. Significant differences were found between the two groups for the following caretaker variables: race/ethnicity, language preference, age, level of education, country in which schooling occurred, and type of insurance coverage for the child. When logistic regression was used to control for confounding, the two variables associated with failure to use the poison center were black race and schooled outside the United States (primarily in Mexico). Poison center callers reported a higher prevalence of poison prevention knowledge and behaviors than non-callers. Educational interventions should be targeted to the groups of caretakers identified who do not use the poison center.

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Citation: O'Connor, Boyle, O' Connor, & Letellier (1992), Self-reported safety practices in child care facilities, American Journal of Preventive Medicine, 8(1):14-8.

Summary: To determine the prevalence of safety hazards and current injury prevention practices in child care settings, we administered a structured telephone interview to a geographically stratified, randomly selected sample of licensed child care facilities. Representatives of 130 child care facilities responded to questions about current injury prevention practices. Specific hazards assessed were related to burns, falls, poisoning, playgrounds, and emergency telephone numbers. Results indicated that 26.8% of providers who knew the temperature of their tap water stated that it was over 130 degrees F.; 14.1% had space heaters accessible to children; 30.3% of those with stairs accessible to children lacked safety gates; 61.4% of those with playgrounds did not have an impact-absorbing surface under playground equipment; 16.9% of respondents had an unexpired bottle of syrup of ipecac; 55.8% demonstrated that a poison control center telephone number was available to them; and 80% of providers could demonstrate the availability of the telephone number of the local ambulance. We conclude that potential and remedial injury hazards exist in some licensed child care centers and that providers of child care within licensed facilities are a promising target for childhood injury prevention interventions.

ADDITIONAL RESOURCE:


[Go To Contents]

OUTDOOR PLAYGROUND INDICATOR

State regulations related to outdoor play areas varied greatly. As a result, many CFOC standards are listed in this indicator. These 29 standards capture the full scope of variation in all of the state regulations.

CFOC STANDARDS (1992):

FA 234: Sunlit areas and shaded areas shall be provided by means of open space and tree plantings or other cover in outdoor spaces.
FA 235: The outdoor play area shall be enclosed with a fence or natural barriers. The barrier shall be at least 4 feet in height and the bottom edge shall be no more than 3 1/2 inches off the ground. There shall be at least two exits from such areas, with at least one remote from the buildings. Gates shall be equipped with self-closing and positive self-latching closure mechanisms. The latch or securing device shall be high enough or of such a type that it cannot be opened by small children. The openings in the fence shall be no greater than 3 1/2 inches. The fence shall be constructed to discourage climbing.

FA 236: The soil in play areas shall not contain hazardous levels of any toxic chemical or substances. The facility shall have soil samples and analyses performed by the local health department, extension service, or environmental control testing laboratory, as required, where there is good reason to believe a problem may exist.

FA 237: The soil in play areas shall be analyzed for lead content initially. It shall be analyzed at least once every 2 years where the exteriors of adjacent buildings and structures are painted with lead containing paint. Lead in soil shall not exceed 500 ppm. Testing and analyses shall be in accord with procedures specified by the regulating health authority.

FA 238: Sandboxes shall be constructed to permit drainage, shall be covered tightly and securely when not in use, and shall be kept free from cat or other animal excrement.

FA 239: Sand used in sandboxes shall not contain toxic or harmful materials.

FA 240: Outdoor storage shall be available for equipment not secured to the ground, unless indoor storage space is available.

FA 241: Anchored play equipment shall not be placed over, or immediately adjacent to, hard surfaces.

FA 242: Outdoor play equipment shall be of safe design and in good repair. Climbing equipment and swings shall be set in concrete footings located below ground surface (at least 6 inches). Swings shall have soft and, or flexible seats. Access to play equipment shall be limited to age groups for which the equipment is developmentally appropriate.

FA 243: All pieces of playground equipment shall be designed to match the body dimensions of children.

FA 244: All pieces of playground equipment shall be installed so that an average adult will not be able to cause a fixed structure to wobble or tip.

FA 245: All pieces of playground equipment shall be surrounded by a resilient surface (e.g., fine, loose sand; wood chips; wood mulch) of an acceptable depth (9 inches), or by rubber mats manufactured for such use, consistent with the guidelines of the Consumer Product Safety Commission and the standard of the American Society for Testing and Materials, extending beyond the external limits of the piece of equipment for at least 4 feet beyond the fall zone of the equipment. These resilient surfaces must conform to the standard stating that the impact from falling from the height of the structure will be less than or equal to peak deceleration 200G(63). Organic materials that support colonization of molds and bacteria shall not be used.

FA 246: All pieces of playground equipment shall be designed so that moving parts (swing components, teeter totter mechanism, spring ride springs, etc.) will be shielded or enclosed.
FA 247: All pieces of playground equipment shall be free of sharp edges, protruding parts, weaknesses, and flaws in material construction. Sharp edges in wood, metal, or concrete shall be rounded to a minimum of 1/2 inch wide on all edges. Wood materials shall be sanded smooth and shall be inspected regularly for splintering.

FA 248: All pieces of playground equipment shall be designed to guard against entrapment or situations that may cause strangulation by being made too large for a child's head to get stuck or too small for a child's head to fit into. Openings in exercise rings shall be smaller than 4, inches or larger than 9 inches in diameter. There shall be no openings in a play structure with a dimension between 4 and 5/8 inches and 9 and 1/8 inches. In particular, side railings, stairs, and other locations where a child might slip or try to climb through shall be checked for appropriate dimensions. Protrusions such as pipes or wood ends that may catch a child's clothing are prohibited. Distances between vertical infill, where used, must be 4 and 5/8 inches or less to prevent entrapment of a child’s head. No opening shall have a vertical angle of less than 55 degrees. To prevent finger entrapment, no opening larger than 3/8 inch and smaller than 1 inch shall be present.

FA 249: All bolts, hooks, eyes, shackles, rungs, and other connecting and linking devices of all pieces of playground equipment shall be designed and secured to prevent loosening or unfastening except by authorized individuals with special tools.

FA 250: Crawl spaces of all pieces of playground equipment, such as pipes or tunnels, shall be securely anchored to the ground to prevent movement, and shall have a minimum diameter that permits easy access to the space by adults in an emergency or for maintenance.

FA 251: The maximum height of any piece of playground equipment shall be no greater than 5 and 1/2 feet if children up to the age of 6 are given access to it, and no higher than 3 feet if the maximum age of children is 3 years.

FA 252: All paved surfaces shall be well drained to avoid water accumulation and ice formation.

FA 253: All walking surfaces, such as walkways, ramps, and decks, shall have a nonslip finish.

FA 254: All walking surfaces and other play surfaces shall be free of holes and sudden irregularities in the surface.

FA 255: Space used for wheeled vehicles shall have a flat, smooth, and nonslippery surface. There shall be a physical barrier separating this space from traffic, streets, parking, delivery areas, driveways, stairs, hallways used as fire exits, balconies, and pools and other areas containing water.

FA 256: All outdoor activity areas shall be maintained in a clean and safe condition by removing debris, dilapidated structures, broken or worn play equipment, building supplies, glass, sharp rocks, twigs, toxic plants, and other injurious material. The play areas shall be free from anthills, unprotected ditches, wells, holes, grease traps, cisterns, cesspools, and unprotected utility equipment. Holes or abandoned wells within the site shall be properly filled or sealed. The area shall be well drained with no standing water.

FA 257: Outdoor play equipment shall not be coated or treated with, nor shall it contain, toxic materials in hazardous amounts that are accessible to children.

FA 258: The center director and the large and small family home caregiver shall conduct inspections of the playground area and the playground as specified below.

FA 259: The general playground surfaces shall be checked every day for broken glass, trash, and other foreign materials (e.g., animal excrement).
FA 260: The playground area shall be checked on a daily basis for areas of poor drainage and accumulation of water and ice.

FA 261: Any particulate resilient material beneath playground equipment shall be checked at least monthly for packing due to rain or ice and, if found compressed, shall be turned over or raked up to increase resilience capacity. All particulate resilient material, particularly sand, shall be inspected daily for glass and other debris, animal excrement, and other foreign material. Loose fill surfaces shall be hosed down for cleaning and raked or sifted to remove hazardous debris as often as needed to keep the surface free of dangerous, unsanitary materials.

FA 262: The playground equipment shall be checked on a monthly basis for the following:

1. Visible cracks, bending or warping, rusting, or breakage of any equipment.
2. Deformation of open hooks, shackles, rings, links, and so forth.
3. Worn swings hangers and chains.
4. Missing, damaged, or loose swing seats.
5. Broken supports or anchors.
6. Cement support footings that are exposed, cracked, or loose in the ground.
7. Accessible sharp edges or points.
8. Exposed ends of tubing that require covering with plugs or caps.
9. Protruding bolt ends that have lost caps or covers.
10. Loose bolts, nuts, and so forth that require tightening.
11. Splintered, cracked, or otherwise deteriorating wood.
12. Lack of lubrication on moving parts.
13. Worn bearings or other mechanical parts.
14. Broken or missing rails, steps, rungs, or seats.
15. Worn or scattered surfacing material.
16. Hard surfaces, especially under swings, slides, and so forth (e.g., places where resilient material has been shifted away from any surface underneath play equipment).
17. Chipped or peeling paint.
18. Pinch or crush points, exposed mechanisms, juncture, and moving components.

RESEARCH REVIEW/GAP ANALYSIS:

Though child care center injury rates are relatively low, the majority of injuries occur on outdoor playgrounds. Many injuries that occur in this setting are minor. However, lowering the height of playground equipment and providing more resilient playground surfaces could further reduce injury risks in child care centers. The injury rate was 1.5 injuries per 100,000 child hours in child care. The most common injuries were cuts or lacerations (31%), bumps or bruises (15%), fractures (10%), and dental injuries (8%). Most injuries (51%) occurred on the playground. Many injuries (18%), and more than half of fractures and concussions (53%) were due to falls from climbing equipment. (Briss, Sacks, Kresnow, & ONeill, 1993). The most important risk factor for injury was the height of the tallest piece of climbing equipment on the playground (Briss, Sacks, Addiss, Kresnow, & ONeill, 1995).

Previous research has documented that the majority of injuries occurring in child care involve falls, and that the most common consumer product associated with such falls is playground equipment. A recent study of children less than 5 years of age admitted to hospitals between 1979 and 1988 for injuries associated with playground equipment found that significantly more injuries occurred in the home than in child care facilities. Fractures were the most common injury, and the head was the most commonly involved body region. Lower limb injuries were usually the most severe. Among the differences between home and child care injuries were the type of equipment involved. For instance, swings were disproportionately associated with head injuries (Kotch, Chalmers, Langley, & Marshall, 1993).
Another study was conducted to determine the prevalence of safety hazards and current injury prevention practices in child care settings (OConnor, OConnor, Boyle, & Letellier, 1992). Results from this study indicated that 27% of providers who knew the temperature of their tap water stated that it was over 130 degrees F, 14% had space heaters accessible to children, 30% of those with stairs accessible to children lacked safety gates, 61% of those with playgrounds did not have an impact-absorbing surface under playground equipment, 17% had an unexpired bottle of syrup of ipecac, 56% demonstrated that a poison control center phone number was available to them, and 80% of providers could demonstrate the availability of the phone number of the local ambulance.

Concern for the safety of children in out-of-home care is growing along with the number of such children. The above studies clearly demonstrate that injuries among children in child care centers occur on playgrounds and are the results of falls affecting the head and upper limbs. Such injuries are often related to reversible hazards on child care playgrounds. Targeted funding might improve child care playground safety. It is also possible to conduct abbreviated playground safety surveys with minimal demand on the time of child care staff. Results from a study of Smart Start in North Carolina holds promise as a potential solution to improving playground safety (Kotch & Guthrie, 1998).

Several excellent resources can be used to help reduce the risks or at least be able to identify and respond to risks. The National Playground Safety manual developed by the University of North Iowa or CDCs Handbook for Public Playground Safety or NAEYCs Healthy Young Children include playground safety information. Other excellent resources are the CPSC Handbook for Public Playground Safety, ASTM/CPSE Audit Guide by Dr. Frances Wallach, published by Playworld Systems, and the National Playground Safety Institute of the National Parks and Recreation Association course to certify playground inspectors.

SUMMARY TABLE:


Summary: Injuries to children 0 to 12 years of age pose a national health problem. Injuries are a particular problem in child care settings. Both research and anecdotal reports confirm that most injuries in the child care setting are cuts, scratches, and abrasions caused by falls indoors and in playgrounds. Other injuries are caused by human bites and motor vehicle pedestrian injuries. Child development centers are an obvious focal point to direct injury prevention services by nurses. The nurse's role in injury prevention is to educate the child care providers about injuries and then teach them the skills to assess and monitor injury prevention strategies. This article discusses the problem of injuries in child care centers in general and discusses injury prevention strategies the nurse can share with the child care provider. Educational resources are included to help the child care providers assess and monitor their own center's injury risk.

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Citation: Cummings, Rivara, Boase, & MacDonald (1996), Injuries and their relation to potential hazards in child day care, Injury Prevention, 2(2):105-8.

Summary: To prospectively determine the incidence rate of injuries that required medical attention among children in day care and to identify possible hazards related to these injuries. Prospective cohort study of children in a sample of licensed day care facilities. From 1 July 1992 to 30 June 1993, 53 medically attended injuries were reported by 133 day care sites; incidence rate 1.9 per 100,000 hours of day care attendance. The rate of injury in 91 small family day care homes was essentially the same as that in 42 larger day care centers; relative rate 1.0 (95% confidence interval 0.6 to 1.9). Injuries that required sutures accounted for 39% of the cases, while 17% required a cast, splint, or sling. No child was hospitalized. Sixty-nine sites were inspected and all had potentially correctable physical hazards, with a
median of 15 hazards per site (range 7 to 26). These potential hazards had little relationship to the risk of injury and a case-by-case review identified only two injuries that might have been prevented by a more energy absorbent playground surface. The incidence of medically attended injuries found in this study is consistent with other studies from the United States. Most injuries were minor and had little relation to physical hazards at day care locations.

Citation: Browning, Runyan, & Kotch (1996), A statewide survey of hazards in child care centers, Injury Prevention, 2(3):202-7.

Summary: The purpose of this study was to determine adherence to selected recommended safety standards in North Carolina child care centers. A self administered questionnaire eliciting information about safety practices in child care was mailed to a randomly selected sample of 409 North Carolina child care centers. One hundred and ninety-five usable questionnaires were returned from child care centers in 75 counties. Results indicated that all of the standards included in the state's child regulations were being adhered to by at least 80% of the centers. However, adherence to recommended standards not included in the state's regulations was quite variable, with one standard implemented by less than 5% of the centers. The lowest rates of adherence were found for standards specifying that resilient surface material be used under playground equipment (4%) and that certain foods that may present a choking hazard to small children not be served (27%). Many hazards not addressed in North Carolina child care regulations are present in child care centers. Some safety standards are not adhered to due to lack of knowledge or limited resources. Inclusion of national standards in state child care regulations appears to reduce, but not eliminate, the likelihood of hazards being reported. Further research should include on-site inspections and attention to safety in family child care.

Citation: Briss, Sacks, Addiss, Kresnow, & O'Neil (1995), Injuries from falls on playgrounds. Effects of day care center regulation and enforcement, Archives of Pediatrics & Adolescent Medicine, 149(8):906-11.

Summary: To measure the incidence of playground fall injuries among children attending licensed U.S. day care centers and to evaluate how injury incidence varies with center characteristics and with the regulatory and enforcement climate in which centers operate. Telephone surveys of directors of day care centers and enforcement agencies and review of written day care regulations. Probability sample of licensed day care centers in 50 states and the District of Columbia. Children attending day care centers with playgrounds. Medically attended playground fall injuries. Among the 1740 day care centers studied, a weighted total of 89.2 injuries occurred during the 2-month study period (0.25/100,000 child-hours in day care). The most important risk factor for injury was height of the tallest piece of climbing equipment on the playground in both bivariate (P = .01) and multivariate (P = .02) analyses. Neither regulations addressing playground safety or playground surfaces nor enforcement patterns were associated with lower injury rates. Additional effort is needed to develop and evaluate regulations and enforcement that reduce injury risks for children while minimizing burden on day care centers. In the meantime, limiting climbing equipment heights may reduce playground injury rates.

Citation: Briss, Sacks, Addiss, Kresnow, & O'Neil (1994), A nationwide study of the risk of injury associated with day care center attendance, Pediatrics, 93(3):364-8.

Summary: Because an increasing proportion of U.S. children spends time in day care center environments, a national estimate of injury risks in day care centers is needed. Interviewed directors of 1797 day care centers from every state and the District of Columbia from October to December 1990 and analyzed medically attended injuries and center
characteristics reported by the directors. The centers were attended by 138,404 children. In the two months before the center directors were interviewed, 556 children sustained injuries requiring medical attention while attending the centers. The injury rate was 1.5 injuries per 100,000 child hours in day care. The most common injuries were cuts or lacerations (31%), bumps or bruises (15%), fractures (10%), and dental injuries (8%). Most injuries (51%) occurred on the playground. Many injuries (18%), and more than half of fractures and concussions (53%) were due to falls from climbing equipment. Day care center injury rates estimated by this study were relatively low. Many injuries that occur in this setting are probably minor. However, lowering the height of playground equipment and providing more resilient playground surfaces could further reduce injury risks in day care centers.


Summary: The increasing number of children attending child day care has led to a corresponding concern for their safety in the absence of parental care. Previous studies have documented that the majority of injuries occurring in child day care involve falls, and that the most common consumer product associated with such falls is playground equipment. This study describes New Zealand children less than 5 years of age admitted to hospital between 1979 and 1988 for injuries associated with playground equipment located at home or a child care facility. There were 528 hospitalized home injuries involving playground equipment, and 145 such day care injuries. Fractures were the most common injury, and the head was the most commonly involved body region. Lower limb injuries were the most severe. Among the differences between home and day care injuries were the type of equipment involved. Swings were disproportionately associated with head injuries.


Summary: To determine the prevalence of safety hazards and current injury prevention practices in child care settings, the authors administered a structured telephone interview to a geographically stratified, randomly selected sample of licensed child care facilities. Representatives of 130 child care facilities responded to questions about current injury prevention practices. Specific hazards assessed were related to burns, falls, poisoning, playgrounds, and emergency telephone numbers. Results indicated that 26.8% of providers who knew the temperature of their tap water stated that it was over 130 degrees F; 14.1% had space heaters accessible to children; 30.3% of those with stairs accessible to children lacked safety gates; 61.4% of those with playgrounds did not have an impact-absorbing surface under playground equipment; 16.9% of respondents had an unexpired bottle of syrup of ipecac; 55.8% demonstrated that a poison control center telephone number was available to them; and 80% of providers could demonstrate the availability of the telephone number of the local ambulance. The authors conclude that potential and remedial injury hazards exist in some licensed child care centers and that providers of child care within licensed facilities are a promising target for childhood injury prevention interventions.

JOINT STATEMENT

Coordinated Efficiencies in Monitoring and Oversight of Early Care and Education Programs

U.S. Department of Health & Human Services and U.S. Department of Agriculture

Purpose

The purpose of this policy statement is to set a new vision for monitoring and oversight policy and practice within states that (a) improves the efficiency and cost-effectiveness of oversight with regard to early care and education programs; (b) creates a culture of health and safety that better supports the healthy development of children; and (c) enables states to be successful in meeting the goals of the Child Care and Development Block Grant (CCDBG) Act of 2014, (P.L. 113-186), which includes monitoring many more child care providers.

This joint HHS and USDA policy statement aims to:

- Encourage states to align monitoring policies and procedures across funding streams where appropriate rather than monitoring exclusively by funding stream;
- Recommend efficiencies that could be achieved through coordination, collaboration, cross-training, differential monitoring, data sharing, and greater use of technology;
- Shift the current focus of monitoring from one of “compliance only” to “continuous quality improvement”;
- Increase access to the Child and Adult Care Food Program (CACFP) to promote nutritious meals and snacks for children in early care and education settings;
- Recommend a universal set of core health and safety standards that apply across programs to support the alignment of monitoring policies and procedures;
- Share examples of best practices and resources to support states in creating a culture of safe, healthy and developmentally appropriate early childhood settings; and
- Ensure that results of monitoring visits are used to target technical assistance and other supports to ensure changes in behavior and improve overall quality of service.

Target Audience

- State Advisory Councils on Early Childhood Education and Care
- State/Tribal/Territory Child Care Administrators, Licensing Agencies, Subsidy Agencies, and Departments of Health
- State/Tribal/Territory CACFP Administrators
- State Head Start Collaboration Offices

Overview

Promoting the safety and healthy development of children in early care and education settings is the overarching goal of monitoring. However, today’s monitoring policies are often disconnected efforts based on the individual funding streams or program type that can lead to duplication and conflict. The various funding streams, including the Child Care and Development Fund (CCDF), CACFP, and Head Start have different legislative requirements, but all have the same overarching goals – to ensure that our
nation’s most disadvantaged children have access to what they need to promote their optimal development.

Although the goals of each funding stream may be shared, there is often little sharing of monitoring requirements, schedules, data and findings across programs. As a result, trends can go undetected and technical assistance efforts are not targeted to the areas of greatest need. In addition, while some early care and education (ECE) programs receive numerous monitoring visits every year (one or more for each funding stream), other programs receive few or none.

Monitoring has long been a challenge within states, in part, because of the many factors that affect monitoring such as funding related to staffing, monitor and provider training and support, enforcement, and provider and parent communication. With the passage of the CCDBG Act of 2014, new basic health and safety requirements, training requirements and monitoring apply to more ECE programs. Until reauthorization, states were not required to inspect child care centers annually and family child care homes were monitored even less frequently. In addition, many states exempted certain categories of care from licensing and monitoring requirements despite the fact that they were receiving CCDF and other public support. Under the new CCDBG Act, states are required to conduct annual inspections of all licensed programs and unlicensed providers (except relatives) that care for children receiving CCDF subsidy.\(^1\)

The Act also requires an inspection to be conducted before a license is granted, contains new minimum training requirements for the inspector workforce, and requires the ratio of licensing inspectors to child care programs be maintained in a manner that promotes timely and effective inspections.\(^2\) If current monitoring systems involving the various state and federal programs were better coordinated and, where appropriate, better integrated, more programs could be reached with existing resources and any new investments could be used more efficiently.

This provides states with an unprecedented opportunity to review their overall approach to monitoring and implement a new vision. Through use of technology, data sharing and aligned monitoring, we believe states can serve more ECE programs and improve the quality of these programs at the same time. It is the purpose of this policy statement to recommend that states use this opportunity to re-think their monitoring policies and practices to create a more effective monitoring system across programs that would improve program quality, allow for more efficient use of resources, operate in a more effective manner, and better serve children and families.

**Section I – Background**

Throughout the United States, more than 266,000 child care programs (centers and homes) are licensed\(^3\) with a capacity for 9.8 million children.\(^4\) More than 177,000 programs (centers and homes) participate in CACFP with an average daily attendance of 4.1 million children.\(^5\) About 57,685 license-exempt providers currently serve children whose care is paid for through a CCDF subsidy and will now be required to have at least an annual inspection.

Funding to states through CCDF and CACFP represent the two largest federal funding streams that require monitoring visits to early care and education settings. Depending on the ECE program and services provided, other types of monitoring visits may also occur. These include State Quality Rating and Improvement Systems (QRIS), State-funded preschool, national accreditation, fire safety, sanitation, health, Early Head Start or Head Start, and potentially reviews related to children with special needs. Table 1 shows early care and education programs subject to monitoring throughout the states.
Although the content and frequency of monitoring visits required by the funding sources may vary based on legislative requirements, they have similar goals and basic programmatic requirements such as staff qualifications, background clearances, enrollment eligibility, attendance requirements, and certain health and safety requirements. It is within these common areas where there may be opportunities for greater efficiency.

Table 1. Child Care and Related Programs Subject to Onsite Monitoring Visits

<table>
<thead>
<tr>
<th>Licensed Child Care</th>
<th>Number of Licensed Programs</th>
<th>Child Capacity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Licensed Programs:</td>
<td>266,017</td>
<td>9,853,135</td>
</tr>
<tr>
<td>Child Care Centers</td>
<td>110,309</td>
<td>8,362,036</td>
</tr>
<tr>
<td>Family Child Care Homes</td>
<td>129,862</td>
<td>1,151,432</td>
</tr>
<tr>
<td>Group Child Care Homes</td>
<td>25,846</td>
<td>339,667</td>
</tr>
<tr>
<td>Quality Rating and Improvement Systems (QRIS) Participating Programs</td>
<td>87,077</td>
<td>QRIS systems in 38 states</td>
</tr>
<tr>
<td>NAEYC Accredited Programs</td>
<td>7,136</td>
<td>50 states</td>
</tr>
<tr>
<td>NAFCC Accredited Programs</td>
<td>1,400</td>
<td>50 states</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Unlicensed Care</th>
<th>Number of Programs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unlicensed non-relative family child care home providers caring for children receiving CCDF subsidies</td>
<td>50,330</td>
</tr>
<tr>
<td>License-Exempt child care centers caring for children receiving CCDF subsidies</td>
<td>7,355</td>
</tr>
<tr>
<td>Non-relative caregivers receiving CCDF subsidies to care for children in the child’s home</td>
<td>27,739</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Child and Adult Care Food Program</th>
<th>Licensed/Approved Participating Programs</th>
<th>Average Daily Attendance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Programs</td>
<td>177,825</td>
<td>4,057,714</td>
</tr>
<tr>
<td>Number of Centers</td>
<td>63,976</td>
<td>3,280,046</td>
</tr>
<tr>
<td>Number of Homes</td>
<td>113,849</td>
<td>777,668</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Other Related Early Care and Education Programs</th>
<th>Enrollment</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>State funded preschool</td>
<td>1,383,450</td>
<td>57 programs in 42 states and DC</td>
</tr>
<tr>
<td>Head Start</td>
<td>944,581</td>
<td>2,932 programs</td>
</tr>
<tr>
<td>Head Start</td>
<td>1,613 programs</td>
<td></td>
</tr>
<tr>
<td>Early Head Start (EHS)</td>
<td>1,061 programs</td>
<td></td>
</tr>
<tr>
<td>Migrant and Seasonal Head Start</td>
<td>37 programs</td>
<td></td>
</tr>
<tr>
<td>Migrant and Seasonal EHS</td>
<td>15 programs</td>
<td></td>
</tr>
<tr>
<td>American Indian/Alaska Native (AIAN) Head Start</td>
<td>148 programs</td>
<td></td>
</tr>
<tr>
<td>AIAN Early Head Start</td>
<td>58 programs</td>
<td></td>
</tr>
</tbody>
</table>

Over the last several decades, effective monitoring policies and practices have been an elusive goal. There are a combination of factors that have challenged states: the largest source of federal child care funding, the Child Care and Development Block Grant, had no requirement for inspections, states faced with budget challenges underfunded or cut funds for monitoring, and state policies were not strong as
agencies sought to draft policy without sufficient resources to undertake monitoring in a more effective manner. One trend is clear. Past reports of poor monitoring practices have not necessarily led to improvements. For example, a 2009 report in Connecticut, “Ensuring Health and Safety in Connecticut’s Early Care and Education Programs,” an analysis of the Department of Public Health Child Care Licensing Specialists’ reports of unannounced inspections was a comprehensive study reviewing 676 child day centers (41% of the state’s supply) and 746 homes (28% of the supply). Among the violations that the report identified in child care centers:

- 48% of the centers had playground hazards,
- 41% administered medicine without a written order,
- 38% had indoor safety hazards,
- 28% had toxic chemicals accessible to children,
- 23% had fire code violations,
- 19% had bathroom sanitation issues,
- 12% didn’t have CPR certified staff, and
- 11% had high chairs without safety straps.

Despite the findings of this report and the potential harm for children attending these programs, a similar report was issued in 2014 by the HHS Office of Inspector General (OIG) that showed many of the same violations occurring in child care centers and family child care homes in Connecticut.

Office of HHS Inspector General Reports on State Monitoring of Child Care Programs

Between 2013 and 2016, the OIG issued reports from nine states and Puerto Rico. The OIG found that 96% of providers that they inspected had numerous potentially hazardous conditions that failed to comply with state licensing requirements. The providers served subsidy children and had a history of compliance violations (i.e., they were not random). Nevertheless, despite having hazardous conditions that could potentially place children at-risk, these programs were (a) licensed and (b) serving CCDF subsidy children.

Weakness in state monitoring and enforcement of licensed child care programs is not new. In 1992, the Government Accountability Office (GAO) issued a report, “Child Care: States Face Difficulties Enforcing Standards and Promoting Quality.” In 1993 and 1994, HHS’ Inspector General issued reports related to inspections/safety compliance in North Carolina and Nevada that found many violations similar to those the OIG has found during the past 3 years. Violations involved: fire code safety, unsanitary conditions, playground hazards, incomplete employee records, incomplete children’s records, and toxic chemicals accessible to children. The Nevada report noted inconsistencies among county monitoring and recommended that “the state provide more specific and definitive guidelines to the jurisdictions to ensure uniformity and consistency.”

A nationwide 1994 OIG report about state child care monitoring across multiple states found similar weaknesses in state monitoring. For example, among 169 programs that were reviewed, the OIG found multiple types of violations including: fire code violations (94), toxic chemicals (84), playground hazards (134), unsanitary conditions (394), missing or erroneous employee records, including a lack of background checks (236), missing or erroneous children’s records (191), and other facility hazards (499).

The 2013-2016 series of OIG reports involving licensed child care centers and family child care homes in Arizona, Connecticut, Florida, Louisiana, Maine, Michigan, Minnesota, Pennsylvania, Puerto Rico and South Carolina shows that there are systemic weaknesses in
monitoring practices that include the same types of violations first identified 20 years ago. Therefore, it is not just about the number of inspections that are conducted but it is also about the effectiveness of how monitoring is conducted – including follow up steps taken after an initial visit where violations are found.

Stakeholder Listening Sessions

In 2016, the U.S. Departments of Health and Human Services and Agriculture held eight joint listening sessions with key stakeholders to better understand challenges with the current early care and education monitoring efforts. Included were child care center directors, family child care home providers, grantees operating Head Start, Migrant and Tribal grantees, child care resource & referral agencies, state agencies and sponsoring organizations administering CACFP, state licensing officials and representatives from national associations reflecting various ECE sectors. Nearly 100 people provided input on their experiences with the current monitoring system across the country.

In general, some center directors and FCC providers report between 8 to 14 different types of monitoring visits to the same site annually while others reported no monitoring visits or infrequent monitoring with sometimes several years lapsing without a monitoring review.

Stakeholder Feedback

The following is a brief summary (in no particular order) of what we learned during the listening sessions:

- Regulations should be more user-friendly, written in plain language, easy to understand, and supplemented by interpretive guidelines.
- Inspectors should be supportive, fostering a culture of mutual respect.
- Monitoring should be more seamless across ECE programs with a shared core purpose (e.g., providers recommended using a common set of health and safety requirements across programs to reduce confusion).
- Inspectors should have sufficient training so that inspections are conducted in a more uniform/consistent manner and by staff knowledgeable about differing requirements between centers and homes.
- Common forms should be developed where possible to avoid conflicting requirements (e.g., conflicting requirements between CACFP and child care licensing or subsidy such as approved attendance sheets or allowable foods. States could review their nutrition requirements to determine areas of conflict with CACFP and use CACFP allowable foods as a base to reduce conflicts).
- Monitoring should be coordinated with duplication reduced (or eliminated).
- Monitoring checklists should be posted on the internet so that providers understand what is expected and are not surprised during an onsite visit.
- Data and documents/previous inspections should be shared among agencies where appropriate.
- Communication among agencies or among departments within agencies should be improved.

Perspective from a Provider Operating in Multiple States

“A big problem that we see across states is that licensors have different interpretations of rules. We understand human factors, but need some type of way to promote more uniformity. Some states’ fire department requirements are in conflict with licensing departments. Who do we follow? Last in the door…”

April 2016 ACF-USDA Listening Session
Monitoring conducted by CACFP and Head Start were viewed as overwhelmingly positive and supportive, while child care licensing inspections were not. What participants told us made the difference in CACFP and Head Start monitoring approaches was:

- Providers felt supported;
- Although the reviews were for compliance, the monitoring visits did not feel adversarial;
- They knew the expectations in advance and they understood the requirements; and
- Providers felt valued and the reviewers offered strategies to promote quality.

State licensing administrators discussed challenges that occur when various programs are overseen by different agencies and departments within state government. They described efforts to integrate departments or divisions to better align monitoring and administration while maintaining the important purposes and focus of the underlying programs. Some states have aligned program standards and have cross-walked monitoring needs and strategies. Some states are increasing the use of technology to increase efficiency, better target technical assistance/support, and identify trends or challenges to be addressed. Some states have revamped their qualifications in hiring and training inspectors. More detail on state innovative practices is described under the best practices sections of this policy statement.

Our stakeholder calls also revealed a frustration beyond challenges related to alignment. For example, licensing agencies are often understaffed which causes a backlog as well as stress among monitors. While licensing administrators agreed that there could be opportunities for greater coordination and efficiency, they also said that they need support from within their administration and state legislature to place a greater priority on monitoring and oversight.

State administrators of the CACFP program stressed the need to improve communication and coordination among monitoring agencies. In discussion with CACFP agencies, three issues arose that require attention and closer coordination between agencies.

- **Responding to Reports of Imminent Danger.** While there may be written protocols within states with regard to cases where one agency contacts another to report a potential case of imminent harm for a child, CACFP agencies report that follow up by some licensing offices (or other appropriate agencies) can be delayed by a week or longer. This delayed response places children at risk and suggests that clear protocols are needed – not just on paper, but also in practice, for all responses to reports of imminent harm.

- **Protection of Children during Investigations.** CACFP agencies report that in some cases when CACFP participation is suspended for imminent threat to children, the children still attend the program (although the food program has been suspended). State licensing agencies should review such cases and determine appropriate next steps (e.g., whether parents should be notified, whether the program should be reviewed for appropriate enforcement actions, etc.).

- **Inspection Delays and Backlog.** CACFP agencies report delays in fire, safety, and health inspections that are needed for CACFP at-risk afterschool programs to operate (i.e., public or private nonprofit organizations eligible to offer afterschool meals and snacks). Inspection backlogs inhibit access to healthy meals and snacks for children. In one state, delays are reported of up to 2 years for a non-school site to obtain the required inspections they need.
Section II – Federal and State Monitoring Models

HHS has released several reports recommending efficiencies for monitoring policy and practice across early care and education programs. In 2015, the Office of the Assistant Secretary for Planning and Evaluation (ASPE) in partnership with the Administration for Children and Families (ACF) published, “Innovation in Monitoring in Early Care and Education: Options for States” and the Administration for Children and Families published, “Caring for Our Children Basics: Health and Safety Foundations for Early Care and Education.” In 2016, the Office of Planning, Research and Evaluation (OPRE) in coordination with ACF published, “Coordinated Monitoring Systems for Early Care and Education.” These reports offer recommendations for more efficient monitoring systems.

In addition, the National Center on Early Childhood Quality Assurance (NCECQA) has published numerous policy briefs and provides technical assistance on best practices and research to assist states in developing more effective monitoring systems.

For ECE, there are four primary federal funding streams that have statutory monitoring requirements. These include Head Start, CCDF, the Military Child Care Program, and CACFP. All share one goal — to improve the quality of ECE programs under their jurisdiction. While CCDF monitoring is described below, for a description of each of the other programs, see Appendix I.

Prior to the CCDBG Act of 2014, states were given broader latitude in assuring that health and safety requirements and enforcement mechanisms were in place to protect children. Under prior law, 4% of funding was required to be spent on activities related to improving the quality of care but activities related to quality were not defined. The new law increases accountability for the receipt and expenditure of child care funding by states and increases the quality set-aside to 12% by FY2020. It requires provider background checks and minimum training, new health and safety requirements and annual monitoring of non-relative providers. CCDF is still a flexible funding stream for states; within federal regulation, states will need to determine how they can best meet the new minimum requirements. The challenge for states varies depending upon individual state policies compared to the minimum requirements to protect the health and safety of children under the new law.

State Governance Models:

As described above, states have considerable flexibility in designing their monitoring systems. And, as described, the new requirements in the CCDBG Act of 2014 have caused many states to re-examine and expand their monitoring systems.

These new requirements have also led several states to rethink their governing structures. Although not a specific purpose of this policy statement, state governance is a major factor in the state’s ability to reduce overlap and align with other statewide efforts such as the Quality Rating and Improvement Systems. According to a BUILD Initiative policy statement, “A Framework for Choosing a State-Level Early Childhood Governance System,” “Governance refers to how (often multiple) entities are managed to promote efficiency, excellence, and equity. It comprises the traditions, institutions and processes that determine how power is exercised, how constituents are given voice, and how decisions are made on issues of mutual concern.” Current state ECE governance structures are frequently disconnected. Recognizing this fragmentation, in the 2007 Head Start reauthorization, Congress created the State Advisory Councils on Early Childhood Education and Care (SACs) in an effort to prompt states to coordinate activities and thereby reduce fragmentation, uneven quality, and inequity in programs and
In the BUILD Initiative ECE Governance policy statement, three models are described for states to consider. These include:

- **Coordinated Governance.** Coordinated governance places authority and accountability for early childhood programs and services across multiple public agencies. In states where this is the model, the SACs (or their equivalent) seek to improve coordination and collaboration among the agencies. Some have formal agreements or even State legislative guidance to support their work. For example, Pennsylvania’s Office of Child Development and Early Learning (OCDEL) is a collaborative venture between the State Department of Education and the Department of Human Services.

- **Consolidated Governance.** Consolidated governance places authority and accountability for the early childhood system in one executive branch agency – for example, the state education agency – for development, implementation, and oversight of multiple early childhood programs and services. One state that has done this is Maryland.

- **Creation of a new Agency.** In this model, a state might create a new executive branch agency or entity within an agency that has the authority and accountability for the early childhood system. The governing entity might be an independent state agency with a single mission focused on early childhood. Georgia, Massachusetts, and Washington have created stand-alone ECE agencies.

**Examples of Recent State Monitoring Alignment Efforts**

The following are examples of states that have made recent changes to improve their State monitoring structures to better align their efforts:

**Rhode Island – Aligning among Agencies.** In Rhode Island, multiple agencies are responsible for administering early learning settings: licensing regulations (Department of Children, Youth, and Families), QRIS- BrightStars (Department of Human Services), and Comprehensive Early Childhood Education (CECE) standards for preschool (Rhode Island Department of Education or RIDE). The three agencies worked to compare and align standards to produce a continuum of quality that includes a similar set of components across all three sets of standards for a better integrated monitoring system. Rhode Island’s work included developing:  

- A common application for licensing, BrightStars and CECE approval to reduce the need for programs to complete three separate applications.

- Job description and assessor reliability policies for ERS and CLASS® assessors to use across both agencies and to ensure that monitoring is coordinated using the same instruments.

- An integrated data system that will allow data to be shared across the Departments of Human Services, Education, and Children, Youth and Families.

- Training for all front line staff from the three agencies, focusing on topics such as curriculum, health, safety, and family engagement.

**Georgia – Linking Compliance with Technical Assistance.** The Department of Early Care and Learning (DECAL) changed the title of the state’s “licensing monitors” to “child care consultants” to better reflect responsibilities related to regulation and support in improving Georgia’s child care system. When hired, child care consultants complete standardized on-boarding [orientation] and then mentoring by
seasoned veteran staff for at least three months. Thereafter, DECAL conducts or contracts for relevant, appropriate professional development to ensure that licensing consultants are adequately equipped to maintain the balance of monitoring and technical assistance.

In 2014, DECAL convened a task force comprised of child care providers and other stakeholders to revamp the agency’s approach to monitoring. The goal of the task force was to recommend an enforcement model that would be:

- Consistent (easily applied equally to all providers)
- Transparent (easy to understand)
- Fair (providers not excessively penalized, especially for violations that they immediately correct), and
- Predictable (providers know what to expect when rules are violated).

The task force recommended a progressive continuum of enforcement designed to better connect or link regulation and support for providers. The task force’s review resulted in an enforcement chart, which is based on a point system, and classifies enforcement actions as prevention (P), intermediate (I), or closure (C). Examples of prevention include technical assistance and/or citations. Intermediate enforcement options include fines and restrictions. Closures encompass both license suspension and revocation. The overall goal is to better support provider needs in attaining and sustaining compliance.

Use of the model began July 1, 2016 and is automated within the licensing database; a program’s compliance zone designation and enforcement action, if applicable, automatically computes at each visit. A program’s compliance zone (good standing, support, or deficient) is based on a summary measure of the program’s 12 month monitoring history with child care licensing rules.

Section III: Moving Toward More Effective Monitoring Strategies
Recommendations & Discussion

The complex array of early learning programs within today’s environment calls for states to consider a new integrated approach to monitoring. This policy statement offers recommendations to improve the efficiency, cost-effectiveness, and long-term outcomes of monitoring across early learning programs.

RECOMMENDATION ONE: Using the Congressionally mandated SACs (or their equivalent), examine the governance structure of early care and education programs to foster greater coordination, collaboration, and policy alignment.

- Utilize SACs (or their equivalent) to:
  - Review any structural barriers that impede communication, coordination, and alignment among the various entities responsible for ECE programs and related funding support.
  - Identify the purpose, function, and expected outcomes of early care and education programs.
  - Determine options that could assist in building a more cohesive early childhood system, which could involve consolidating the governance of related early learning programs within one agency, within a collaborative venture between two agencies, or creating a new agency to house early childhood programs.
DISCUSSION: Many states and localities have worked to better coordinate programs and system infrastructure, accelerated by the Race to the Top Early Learning Challenge Fund and federal promotion of coordination in the 2014 CCDBG Act as well as Head Start policies. Yet, in many cases, policies, goals, and oversight strategies are not aligned. Fragmentation in governance structure and authority can impede the ability to coordinate and share information across programs. There is no single model that is likely to work for every state, however, the Administration for Children & Families (ACF) recommends that every state review any structural barriers that impede communication, coordination, and alignment. How best to structure governance begins with identifying the purpose, function, and expected outcomes of early care and education programs. While it is not easy to re-align state governance structures, coordination, collaboration, alignment and accountability may be easier for related programs when they are housed under one roof. Interviews with agency, department and division directors engaged in governance reform recommend that the exact form of governance should follow intended function and that “these functions are present and linked in ways that encourage the system’s coordination, coherence, sustainability, efficiency, and accountability at all levels of service delivery.”

Examples of State Governance Models that Promote Alignment

- Georgia has consolidated governance of child care, preschool, and CACFP in the Department of Early Care and Learning (DECAL), a stand-alone agency.
- Maryland has consolidated governance of child care and preschool into the state education agency.
- Massachusetts has consolidated governance of child care and preschool into the Department of Early Education and Care, a stand-alone agency.
- Michigan has consolidated governance of child care, preschool, and early intervention in the Office of Great Start within the Department of Education.
- North Carolina has consolidated governance of child care and preschool into the Division of Child Development and Early Education within the Department of Health and Human Services.
- Pennsylvania has consolidated governance of child care, preschool, and early intervention programs within the Office of Child Development and Early Learning (OCDEL), a collaborative venture between the state Department of Education and Department of Human Services.
- Vermont has consolidated governance of child care, preschool, and early intervention into the Department of Children and Families.
- Washington has consolidated governance of child care, preschool, and early intervention within the Department of Early Learning, a stand-alone agency.

RECOMMENDATION TWO: Design, implement, and evaluate consistent approaches, including differential monitoring systems to target resources to providers at the greatest risk of providing unsafe settings and to promote greater monitoring efficiencies.

- Consider differential monitoring systems to:
  - More cost-effectively determine the depth of monitoring needed as well as the frequency;
  - Better target technical assistance and training to support providers who could benefit from assistance.

Discussion: ACF’s Office of Child Care and the National Association for Regulatory Administration (NARA), published “Best Practices for Human Care Regulation” in 2015, which helps states define key system characteristics of high-performing regulatory organizations. This document outlines best
practices, provides guidance to implement the best practices, and includes a self-study assessment tool\textsuperscript{65} to help organizations score their performance and facilitate process recognition and improvements. Among best practices that are recommended are three types of assessments: for monitors, providers, and process to ensure that monitoring systems are working as intended.\textsuperscript{66}

According to NARA, “most performance problems are system-driven problems rather than people-driven problems because the overwhelming majority of people want to do a good job. Individuals flourish when they can see themselves as knowledgeable contributors in a sharp, high-performing organization.”\textsuperscript{67} NARA’s best practices document lays the foundation for an organization to focus on and assess its resources and processes across the board.

In “Contemporary Issues in Licensing, Monitoring Strategies for Determining Compliance: Differential Monitoring, Risk Assessment, and Key Indicators,”\textsuperscript{68} full and abbreviated monitoring strategies are reviewed. A differential monitoring system can be used to recognize a provider’s strong record of licensing compliance with abbreviated or less frequent inspections if there have been no serious violations for a period of time. For providers with rule violations and compliance issues, licensing agencies can use differential monitoring to focus more attention on those facilities with additional monitoring visits, targeting visits on problem areas, and providing technical assistance.\textsuperscript{69}

With the requirement in the CCDBG Act of 2014 to ensure that non-relative providers serving children whose care is paid for through a CCDF subsidy receive at least one annual inspection, a “one-size-fits-all” approach may not be the most cost-effective strategy to broaden the base of providers who need an annual inspection (at a minimum).

As of 2014, 37 states used abbreviated compliance forms during routine inspections and 13 states reported using differential monitoring.\textsuperscript{70} It’s not about whether to conduct monitoring visits or not, but rather, it is about the type of monitoring visit to promote efficiencies and greater effectiveness, continuous quality improvement, and accountability. Continuous quality improvement applies to both internal monitoring protocols and practices as well as external provider improvement. Using information collected throughout monitoring visits can assist states in targeting support and resources (i.e., technical assistance) to providers moving the system from determining whether a provider complies on specific standards to helping providers understand why it is important to the health and safety of children that specific standards be met. Quality improvement and compliance are not mutually exclusive but rather components of a more seamless monitoring approach.
State Best Practices:
Washington Key Indicator System

Washington’s monitoring system is based on the 13 key indicators developed by Dr. Richard Fiene for the U.S. Department of Health and Human Services. The indicators are used across all programs (centers, FCC homes, and school-age programs). Providers with non-expiring full licenses are monitored using an abbreviated checklist when the site has demonstrated a high level of compliance since the prior visit. This includes, but is not limited to, no valid complaints, compliance agreements, or other information demonstrating noncompliance with licensing regulations. Licensors are required to move to a full checklist in cases where providers are not in compliance with any of the key indicators.

Washington also posts abbreviated checklists on line to inform providers.


RECOMMENDATION THREE: Align monitoring policies and procedures across funding streams to promote more effective practice, reduce confusion within ECE programs, and realize cost efficiencies.

- Conduct an organizational assessment to identify:
  - Who is monitoring providers,
  - The role of each monitor,
  - The frequency of monitoring,
  - Tools that are used in monitoring,
  - Staff competencies (qualifications, training, and oversight), and
  - Data systems used in monitoring.

- Review all standards used to monitor ECE programs and determine where there are inconsistencies, duplicative requirements or conflicts.

- Review whether the data and monitoring reports are shared or, could be shared between agencies to reduce duplication and maximize efficiency.

- Identify policies that stem from statute or regulations, cite specific requirements, corrective action requirements, remedies and penalties.

DISCUSSION: ACF recommends that states use “Mapping the Early Care and Education Monitoring Landscape,” tool to assist in identifying how to begin developing a more efficient monitoring system. A coordinated approach could not only produce systemic efficiencies but also help evolve the culture of monitoring from compliance to continuous quality improvement. An aligned system with cross-training could assist monitors in better understanding how the pieces fit together and how fostering a culture of improvement could assist providers with the support they need to be successful.

Many state quality rating and improvement systems are separate from child care licensing and from child care subsidy systems. They operate independently, but are not integrated to promote provider participation and parent awareness. The majority of state QRIS are voluntary and in only 12 states is participation mandatory for providers caring for children on a CCDF subsidy. Parallel systems create layers of monitoring that could be more efficient if the system components were better integrated.

**State Best Practices:**

**North Carolina Integration of Licensing, QRIS, and Subsidy**

In North Carolina, the state’s Star Rated License System is part of the Division of Child Development and Early Education and is based on the total number of points earned. Licensing is embedded in the state’s quality rating system with level 1 representing licensed care. A facility receives one point for meeting minimum licensing requirements and will be issued a One Star License if that is the extent of that facility’s achievement. To earn more than one point, a facility must meet higher voluntary standards that are based on two components: program standards and education levels of staff. There is also an opportunity for a facility to earn one additional point for meeting a programmatic or education quality point option. A facility can earn up to fifteen (15) points total. For providers to serve children whose care is paid for through CCDF, programs must achieve a 3 to 5 star license.


The monitoring of home-based programs is a particular concern because the number of licensed homes has been declining. Since 2011, the number of licensed homes has declined by 22,489 (14.7%). The capacity within licensed homes has declined by spaces for 165,581 children (12.5%). Home-based care
is an important choice for many families -- not just for its smaller environment but also because home-based providers may offer more flexible hours (including nontraditional hours). As states consider monitoring strategies, intentional approaches to better support home providers, including those with low literacy levels and also those who may not speak English as a first language, should be considered to ensure that the supply of child care homes does not continue to decline. Particularly in rural areas where home-based care may be the only option, it is concerning that the number of licensed homes is declining.

RECOMMENDATION FOUR: Wherever possible, adopt a universal set of health, safety and performance standards to be used across programs.

• Consider using ACF’s “Caring for Our Children Basics: Health & Safety Foundations for Early Care and Education,” which represents the minimum health and safety standards experts believe should be in place for center-based or home-based child care. Standards on the following topics are included:
  o Staffing
  o Program Activities for Healthy Development
  o Health Promotion and Protection
  o Nutrition and Food Service
  o Facilities, Supplies, Equipment, and Environmental Health
  o Play Areas/Playgrounds and Transportation
  o Infectious Disease
  o Policies

DISCUSSION: In June of 2015, the Administration for Children and Families published, “Caring for Our Children Basics: Health & Safety Foundations for Early Care and Education,” to reduce conflicts and redundancies found in program standards linked to multiple funding streams. Caring for our Children Basics should not be construed to represent all standards that would need to be present to achieve the highest quality of care and early learning just a minimum to serve as a floor across early care and learning programs. ACF recommends adoption of the standards contained in Caring for our Children Basics to improve health and safety standards in licensing, quality rating and improvement systems and to promote efficiency in monitoring systems for ECE settings.

By using a core set of health and safety standards across ECE programs, states can implement a more seamless monitoring system. As the new Head Start Performance Standards and the CCDBG regulations were developed, ACF aligned basic requirements wherever possible. In areas such as background screening, basic training requirements and health and safety, the two regulations, if not completely aligned, are not in conflict. In addition, the new Head Start Performance Standards offer specific requirements around state licensing and QRIS to reduce overlapping or duplicative requirements. The new Head Start Performance Standards also defer to the nutrition requirements of CACFP.

Along with the adoption of core health and safety standards, Child Care Health Consultants (CCHCs) can be important resources to: support local programs in meeting state licensing requirements, help create a culture of health and safety, and support for continuous quality improvement.

CCHCs are licensed health professionals with education and experience in child and community health as well as early care and education settings. While CCHCs do not provide clinical services, they do offer technical assistance and consultation to early care and education programs in a variety of areas including but not limited to national health and safety standards for out-of-home child care; state child
care licensing and public health requirements; indicators of quality early care and education related to health and safety; recognition and reporting requirements for infectious diseases; Early and Periodic Screening, Diagnosis, and Treatment screening recommendations and immunization schedules for children; importance of medical home and local and state resources to facilitate access to a medical home as well as child health insurance programs including Medicaid and State Children’s Health Insurance Programs; development and implementation of health and safety policies and practices including poison awareness and poison prevention; health literacy on a variety of topics; and disaster planning resources and collaborations within child care communities (CCHCs also link programs with community resources for child, family, and staff health and mental health).  

In Pennsylvania, initial evaluation of the Early Childhood Education Linkage System (ECELS) “Infant/Toddler Quality Improvement Project” clearly demonstrates the efficacy of utilizing a CCHC mentoring approach to improve compliance with selected Caring for Our Children Basics standards such as safe sleep practices and SIDS risk reduction, diaper changing procedures, training related to medication administration, hand hygiene, physical activity, and child abuse reporting. The evaluation also showed improvements in meeting the needs of children with disabilities.  

RECOMMENDATION FIVE: Based on a statewide assessment of need, establish caseload requirements that take into account the type of ECE program being monitored and the varying levels of quality, different locations (rural vs. urban), and type of setting (center vs. homes).  

- Set reasonable caseloads for inspectors
  - NARA recommends 50-60 programs per inspector and two inspections annually.
- Rebalance the caseload based on geography, type of program and setting, and program quality.

DISCUSSION: The average child care licensing inspector caseload includes 97 centers. The average licensing inspector caseload for home monitoring is 103. Monitoring caseloads range by state from 25-300. In some states, monitors inspect both centers and homes. For CACFP, federal regulations require sponsoring organizations to have one full time staff person for each 50 to 150 child care homes it sponsors and a sponsoring organization of centers must document one full-time staff person for each 25 to 150 centers it sponsors. However, within the above ranges, it is the State CACFP agency’s responsibility to determine the appropriate level of monitoring staff for each sponsoring organization.  

In “Best Practices for Human Care Regulation,” a document produced by ACF (the Office of Child Care) and NARA, workload assessments are recommended every 3 years or sooner. Effective caseload assessments use historical data to identify types of programs, types of activities, and time to conduct each activity (e.g., a person monitoring across funding streams may require a lower caseload compared to a person monitoring only one type of program). They also use geographic service areas and deployment patterns for efficient and effective monitoring visits, which includes travel time. NARA also recommends that workload calculations should include time for professional development activities.  

RECOMMENDATION SIX: Create policies and monitoring approaches across agencies that encourage and support cross-training of personnel to support a coordinated system.  

- Consider maximizing CACFP monitoring to support quality care as well as to increase access to CACFP.
- Consider developing a Memorandum of Understanding (MOU) with the CACFP agency to potentially:
  - Develop cross-training initiatives based on key indicators;
- Provide reciprocity of certain monitoring items to reduce duplication and conflict;
- Develop common forms (e.g., attendance forms acceptable for both CACFP and CCDF subsidy); and,
- Promote efficiencies among and between systems.

**DISCUSSION:** Currently, in many states, CACFP monitoring and child care program monitoring occurs through separate efforts. Within states, CACFP is administered by the state health agency, the state education agency, the state human services agency, or the state agriculture department. Child care programs are administered by the human resources agency, the education agency, the economic development agency, the labor/workforce agency, or the social services agency. In some states, components of child care programs are spread across different agencies or departments (e.g., child care subsidy, child care licensing, and state quality rating and improvement systems may be administered by different agencies or different departments or divisions).

Given the frequency of CACFP sponsor monitoring, in rethinking an aligned integrated state monitoring system, it makes sense to review how to better maximize CACFP monitoring to support quality care as well as to increase access to CACFP.

State agencies administering CACFP and state child care licensing agencies could develop a Memorandum of Understanding (MOU) to potentially develop agreements about how to undertake monitoring that would allow for sharing resources for better coordination. For example, a state with a key indicators system or differential monitoring system could potentially develop a cross-training initiative where CACFP monitors could be trained on a small subset of key indicators identified by the child care licensing agency. The MOU could consider a scaffolding approach to maximize resources among agencies. Where appropriate, States could use [Caring for Our Children Basics](#) as a core set of health and safety requirements across programs, which would provide consistency that has been lacking and a floor to quality from which all states could operate. States could provide reciprocity of certain monitoring items to reduce duplication and promote uniformity across program standards where applicable (e.g., CACFP nutrition standards and food safety could be adopted by child care licensing agencies instead of each agency having separate (and sometimes conflicting) requirements). Head Start already requires CACFP participation.

An MOU could also include an agreement to use a uniform attendance form or other forms that could be shared to reduce administrative burdens for programs. These types of actions can be undertaken by states without approval from HHS or USDA. For example, as long as federal requirements are met, states can create their own integrated attendance forms or monitoring forms. If helpful, HHS and USDA could support states as conveners and disseminate information about state level best practices.

With MOUs, monitoring policies could be constructed and undertaken in a more efficient manner which not only promotes systemic coordination and effectiveness but also avoids the number of times providers are disrupted in the provision of services for children.

**RECOMMENDATION SEVEN:** Develop uniform personnel requirements for all monitors that include a description of the knowledge, skills and abilities (KSAs) necessary to meet the goals of the monitoring policies and training that supports continuous quality improvement and a culture of support for providers and inspectors.

ACF recommends the following to promote a more supportive approach to monitoring that fosters efficiency and mutual respect:
• Ensure all monitors are provided systematic comprehensive training before they begin work and routine in-service training throughout the year. This should include training on all standards, rationale for why the standards are important, and examples of what they should review to determine compliance.
• Ensure all monitors are trained in balancing compliance and continuous quality improvement.
• Ensure job descriptions reflect shared components of monitoring processes.
• Share monitoring checklists, along with the rationale for the requirements with the ECE providers and general public including parents to remove the element of surprise and to enable providers to fully understand standards for which they will be held responsible.
• Include mentoring and coaching for all newly hired monitors by experienced staff during a probationary period.
• Ensure that those who monitor family child care home providers have specialized training to fully understand child care home regulations and the operation of home-based programs.
• Determine appropriate caseloads for the various program types and ensure monitors are not overwhelmed. If warranted, adjust caseloads for monitors who have difficult programs or other unique circumstances.
• Support a shared vision among agencies and divisions to avoid unintended consequences when issues are identified during monitoring visits.
• Include inspection checklists in the materials providers receive during trainings, upon licensure and licensure renewal, and that providers can easily access online; and
• Conduct regular, systematic surveys of ECE providers in order to allow those monitored to provide feedback and to promote continuous quality improvement among providers and inspectors.

DISCUSSION: Currently, multiple agencies share responsibility for monitoring the same or similar standards across settings. Aligning monitoring strategies is part of implementing a coordinated process, however, it begins with cross-training and basic competencies of monitors. As of 2014, 39 states required child care inspectors to have at least a Bachelor’s degree. In 24 states, the content or major of the degree must be in early childhood education, child development, or a related field. Twenty-one states also required experience working in a setting with children. In addition, 28 states required licensing staff to complete additional training each year. It is not known how many states engage in cross-training to promote monitoring across programs and funding streams. Only 6 states use inter-rater reliability studies to help promote consistency in monitoring. Inter-rater reliability is a critical issue that needs to be addressed by states; it is as important as the issue of validity. With regard to CACFP personnel requirements, federal regulations require that each sponsoring organization provide adequate supervisory and operational personnel for the effective management and monitoring of the program at all facilities it sponsors.

It is not easy to change the culture of monitoring from a framework of compliance to support for continuous quality improvement. Specific training on balancing compliance and continuous quality improvement is needed so that both inspectors and providers are supported. The listening sessions revealed challenges with licensing inspector knowledge of state regulations and too often the attitude of monitors in conducting inspections. The key to changing the culture of the monitoring framework is to have an underlying quality assurance program. This is a major paradigm shift in seeing the glass as half full rather than as half empty. NARA’s “Best Practices for Human Care Regulation,” includes a number of recommendations related to quality assurance programs such as monitor training, coaching, workload, and provider feedback. While each state may define quality assurance differently, at the core is the ability to have feedback on the system and how each of the components of the system is working. Florida, Georgia, Oklahoma and Texas have a formal quality assurance program with written policies designed to increase consistency across the state.
State Best Practices: Training of Licensing Staff

**Florida’s** staff undergo inspector led pre-service training, 38 hours of nine online child care training courses (e.g., family child care home licensing and center licensing, identifying and reporting child abuse and neglect, child growth and development, record-keeping, etc.). Supplemental training includes shadowing an experienced licensing specialist in conducting a child care center inspection, family day home inspections, assisting in opening a new facility, and ongoing professional development and in-service training. With a year of on-the-ground experience, inspectors (referred to as family services counselors) can complete the National Certified Investigator/Inspector Training (NCIT) certification offered by the Council on Licensure, Enforcement, and Regulation (CLEAR). Upon successful completion of the NCIT Basic certification, licensing staff can complete the NCIT Advanced certification. Currently, about 90% of Florida’s licensing staff have obtained the NCIT Basic certification and 25% have obtained the Advanced certification. Beginning this year, for staff who have completed the NCIT Basic program, the Department of Children and Families will pay for costs related to completing the NARA National Regulatory Professional Credential (NRPC).

**Washington’s** staff complete the NARA curriculum on regulatory enforcement and human care regulation and some staff have completed the NARA National Regulatory Professional Credential (NRPC). New licensors complete the NARA online curriculum as they come on board. Washington uses a variety of professional training techniques, including agency specific courses offered both online and in person. The Department of Early Learning is currently developing cross agency trainings between licensing, the state’s preschool, and the quality rating and improvement system (Early Achievers) staff. Also under development is a parallel training track for both licensing staff and early learning providers, focusing on the new standards as well as increasing the quality in child care.

**Quality Assurance & Consumer Feedback**

**Oklahoma** conducts annual regional audits of each supervisory area, during which a team of licensing staff from around the state reviews cases to determine if licensing requirements, policies and procedures are being consistently implemented. Policies governing the audit process are publicly posted. Oklahoma also solicits feedback about inspections through biannual provider satisfaction surveys and community forums.

**Florida’s** regional program analysts conduct annual quality assurance monitoring visits to determine if policies are followed by each licensing counselor for each provider type in each region.

**Georgia’s** regional directors evaluate field staff by conducting quality assurance visits at least once per year for all consultants. Lead consultants also conduct joint visits with field staff throughout the year in a more informal quality assurance process. The purpose of the joint visits is to evaluate staff on:

- Professional practice
- Consistent and accurate evaluation and application of rules and regulations
- Principles of documentation; and
- Conducting an appropriate exit conference during the inspection.

**Utah** evaluates its program by having managers conduct onsite observations of licensing inspections 4 times per year. Child care providers are given inspection feedback forms after each inspection. The program administrator reviews and records the feedback, and licensors receive a monthly report that includes all comments received from providers. Program managers meet with licensors as needed to discuss any concerns or clarifications.

RECOMMENDATION EIGHT: Develop cross-agency protocols that ensure agencies are responsive when monitoring reveals a situation where children may be at risk.

- Develop written guidelines and timeframes for conducting complaint investigations and allegations of illegal operations.
  - Ensure clear protocols are in place.
  - Prioritize investigations by levels of risk.
  - Include timeframes ranging from immediate to no longer than 5 days.
  - Integrate timeframes into automated data systems.

DISCUSSION: ACF and NARA’s "Best Practices for Human Care Regulation," recommends that licensing agencies have written guidelines that include timeframes for conducting complaint investigations and allegations of illegal operations, that the guidelines take into consideration the severity of the complaint and assign timelines based on severity. Because the health and safety of children may be at risk, NARA recommends that complaints received by any individual or organization should be treated with the same level of response. When multiple agencies are involved in a complaint, there should be written protocols in place to clarify timelines and a lead agency. Communication, collaboration, and timeliness are each important to ensure the safety of children.

In addition to protocols for complaint investigations, NARA recommends that corrective action plans be based on cause and monitored systematically for compliance. Such plans should include corrective action expectations, templates, required signatures, and expected follow-up by both the provider and the regulatory program. The plan should require corrective action completion within an appropriate time frame, which at a minimum should be the next licensing inspection or at another time consistent with the level, frequency, and type of violation. Any timeframes developed through the policy process should be integrated into a state’s automated data system.

RECOMMENDATION NINE: Ensure that all requirements are publicly available, written in plain language with clear rationale and indicators about how the requirements will be assessed. Publish interpretive guidelines to promote clarity, transparency, and greater utility among the provider community and the monitoring workforce.

- Ensure regulations are user-friendly, written in plain language, easy to understand, and supplemented by interpretive guidelines.
- Ensure regulations take into account cultural competence and respect community diversity.

DISCUSSION: Interpretive guidelines provide a practical guide to how an agency will apply, measure, and enforce a rule. They can help child care licensing staff and providers better understand the purpose of each rule and how it is to be measured to assess a facility’s compliance with licensing regulations. According to NARA’s 2011 survey, about half (24) of states in 2011 had developed interpretive guidelines in some manner.

State Best Practices: Oregon Equity Lens

Oregon’s Equity Lens aids in recognizing institutional and systemic barriers and discriminatory practices that have limited access for many children because of their race, ethnicity, English language proficiency, socioeconomic status, gender, sexual orientation, special health care needs, and geographic location. By utilizing an equity lens, Oregon aims to provide a common vocabulary and protocol for resource allocation, policy development and evaluating strategic investments.

Oregon Equity Lens:
http://www.ode.state.or.us/superintendent/priorities/final-equity-lens-draft-adopted.pdf
The benefit of interpretive guidelines is that both providers and monitoring staff can use them as a tool to more easily understand state policies and meet state expectations.

**State Best Practices:**
**Virginia and Washington Interpretive Guidelines**

**In Virginia,** the Department of Social Services (VDSS) has published “interpretive guidelines” for licensed family day homes. These guidelines are written in plain language and assist providers and licensing inspectors in better understanding the state’s regulations. VDSS has also published a technical assistance manual for centers, in a Q&A format that is a form of interpretive guidelines written in an easy to understand manner with concrete examples to improve compliance with state regulations.

*Standards for Licensed Family Day Homes with Interpretation Guidelines*

*Standards for Licensed Child Day Centers, Technical Assistance*

**In Washington,** guidebooks for both centers and family child care homes have been published with the community college and align with the state’s current rules. The guidebooks are in electronic format with links on the state agency web site. They provide guidance on every phase of the licensing process and best practices in child care for meeting the child care rules. The guidebooks are used to assist providers, assist licensing preservice and ongoing training, and also by the community college in conducting provider training.

*Child Care Center Licensing Guidebook*
http://www.del.wa.gov/publications/licensing/docs/ChildCareCenterLicensingGuide.pdf

*Family Home Child Care Licensing Guide*


**RECOMMENDATION TEN:** Utilize technology to both increase efficiency and better target training and technical assistance resources to monitors and providers. Develop policies that support the sharing of data between agencies.

- Utilize technology to increase accountability, efficiency, and transparency.
- Use data to better understand training needs for both monitoring staff and providers.
- Share data and information among and between agencies and programs where appropriate.

**DISCUSSION:** According to the National Center on Early Childhood Quality Assurance, 34 states report using portable devices to help staff more efficiently inspect and monitor licensed programs such as through laptops, tablets or other digital means. Some of the benefits include:

- Monitoring data are recorded once during the inspection visit and do not have to be reentered upon return to the office.
- Pre-population of forms with program information can reduce the time spent on paperwork and allow more time for observing care.
• Software that performs spell-check, provides an alert when something has been overlooked, and allows for the selection of standardized text makes reports more consistent, quicker and more accurate.
• Licensors can access relevant monitoring information such as prior history, requirements and the licensing statute while in the field.
• Licensors can produce an inspection report on site.
• Posting the report onsite or on the internet is more efficient.

Some states work internally within their agency and others contract with private vendors. Greater use of technology can not only make the monitoring system more efficient (and cost-effective) but also can be used for strategic purposes. For example, states that can integrate compliance issues can better target training for providers and monitors to better address identified challenges. In Georgia, software enables the state to track programs, trainers, and monitoring consultants, to track types of violations, and to address them regionally by trend such as if there is an uptick in playground problems, trainings can be specifically targeted based on identified need.

**State Technology Best Practices: Indiana Family and Social Services Administration**

Indiana uses wireless webforms software. Licensors are provided with a tablet computer with a USB camera, field case, docking station, blue-tooth enabled portable printer, and a wireless card to transmit data. Forms are automatically populated with program information. A plan of correction form is populated with any noncompliance information. The following benefits were reported:

**Cost Reductions**
• Reduction in costs for consultants, saving 26% ($316,605 annualized)
• Reduction in clerical effort by 82% ($30,360 annualized)
• Potential savings by reducing the risk of making errors in subsidy payments
• Savings in travel expenses by eliminating trips into the office to submit and pick up forms
• Elimination of costs associated with preprinting of paper inspection forms

**Productivity Increases**
• Reduction in licensing application processing time from a 35 day average to less than 2 days
• Increase in the number of inspections that can be completed from 6,849 to 9,288 (annualized)
• Increase in accurate reporting and data-driven management decisions with more timely data
• Implementation of standardized workflow processes

Source: *Use of Technology to Enhance Licensing Administration*. National Center on Child Care Quality Improvement (2014).

In addition to a greater use of technology is the critical need for data and information sharing. A coordinated monitoring strategy depends on the ability to share data and information among and between agencies. In too many states, there is no sharing of data and no sharing of information (e.g. monitors do not have access across programs to previous inspection reports to reduce duplication or to promote follow-up). Monitors should know across settings the spectrum of programs in which providers participate (e.g., licensing, CACFP, Head Start, QRIS, State Pre-K, etc.) to promote efficiencies in monitoring approaches. Head Start data could be shared for community birth-to-five planning purposes as well as CLASS© results where appropriate for use in quality rating systems (e.g., 15 states use CLASS© observations as part of state QRIS ratings).
With the requirement under the CCDBG Act of 2014 to post inspection reports on the internet, some of the information sharing will be facilitated. However, the challenge with data and information sharing goes beyond the posting of licensing reports. For example, although allowed, in most states, CACFP participation data and disqualification actions are not shared with the state licensing office. Conversely, the state licensing data is not shared with the state CACFP administering agency.

In Florida, Georgia, and North Carolina, CACFP state agencies link with child care licensing agencies or divisions to promote tracking of licensing activities (e.g., new issuances, denials, suspensions, revocations, etc.). This type of data sharing enables both agencies to be better informed about the status of programs and to protect children.

For efficiency and cost-effectiveness, it is recommended that states and CCDF tribal grantees develop policies to enable data and information sharing between agencies to promote more coordination, collaboration, and efficiencies throughout state monitoring initiatives.

In addition, there should be more information sharing with the public, particularly families. While posting inspection reports on the internet is required under the CCDBG Act of 2014, the content of those reports should be easy to understand and prioritized related to severity. Merely posting reports on the internet may not be helpful to parents depending upon the format a state uses. The concept behind posting reports is to enable families in a user-friendly manner to become educated consumers. Reports that are dense, hard to understand, and not prioritized undermine that goal. Whether it is the format used in posting inspection reports or the new requirement under CCDBG to post provider quality indicators, the information needs to be easy for the public to access and digest.

Data sharing among state agencies and Tribes where applicable can also help promote state outreach strategies (e.g., strategies related to assisting more providers to become licensed or to participate in CACFP). Data sharing when combined with data visualization (e.g., geocoding licensed program data and

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**State Best Practices:**

**CACFP Agency and Child Care Licensing Data Sharing**

**In Florida,** each month the Department of Children and Families (DCF) sends to the Division of Community Health Promotion, the CACFP state agency, an excel spreadsheet that includes an updated listing of all licensed centers and homes. In addition, a list of revoked licenses is sent each quarter. If during a routine inspection, child care licensing staff discover an egregious situation (e.g., imminent threat to children), it is reported immediately to both the field staff assigned to the area and the central office in Tallahassee via a phone call and a follow up email.

**In Georgia,** both the licensing agency and the CACFP administering agency are part of the Department of Early Care and Learning which administers Georgia’s Pre-K Program, licenses child care centers and home-based child care, administers Georgia’s Childcare and Parent Services (CAPS) program, federal nutrition programs, and manages Quality Rated, Georgia’s community powered child care rating system. Staff from both agencies participate in regular meetings to review issues related to licensing and CACFP so that each agency is kept abreast of issues and concerns as soon as they are discovered.

**In North Carolina,** whenever the child care licensing agency takes any adverse action (e.g., a warning, revocation, suspension, etc.), the CACFP state agency receives a copy of the action as soon as it is issued.

These partnerships promote agency coordination, the health and safety of children, and accountability for public funding.

Source: USDA email exchanges with HHS staff, Florida, Georgia and North Carolina CACFP state agencies. (August 2016).
CACFP participation data) can help both agencies identify areas within a state where there is an imbalance between supply and demand leading to proactive strategies to better serve children.

State Best Practices: CACFP and Child Care Data Sharing in Virginia

In Virginia, the Department of Health, the Virginia Early Childhood Foundation, and Child Care Aware of Virginia held a CACFP summit in June of 2016 to support quality child care through increasing CACFP participation. Through data visualization, a data-driven strategy is being developed to better target outreach for both CACFP participation and licensing. Data sharing has enabled partners to work together in a more coordinated and strategic manner to ensure that more children have access to safe settings as well as nutritious meals and snacks.

Section IV. CONCLUSION

The reauthorization of CCDBG and the revisions to the Head Start Performance Standards offer an opportunity to review current state (and federal) monitoring systems to better align standards and promote greater efficiencies to ensure a more effective, uniform, and cost-effective approach to monitoring. The final CCDF regulations include CACFP agencies as a required partner for the CCDF Lead Agency, which can help promote more coordination, collaboration, and policy alignment.

Coordinated monitoring begins with mapping the number of inspections within the early care and education community, who conducts them, what the purpose of each is, what programs receive monitoring visits, the frequency of such visits, the tools used to measure compliance or performance, applicable statutory and regulatory requirements, and how a systemic monitoring approach can be better designed. Considering the use of differential monitoring systems can bring about efficiencies that enable more resources to be allocated to programs that need additional attention, including those currently not subject to inspection but that will be under the new CCDBG law.

Using Caring for our Children Basics across programs will ensure that there is a core set of health and safety standards regardless of early learning setting. Developing MOUs between state agencies or departments with reciprocity or agreement on common standards (e.g., CACFP meal and food safety rules, attendance forms, etc.) can help promote more effective and efficient monitoring approaches. Promoting continuous quality improvement and compliance will lead to a culture of support bolstered
by monitor training, the use of interpretative guidelines, customer feedback, and reasonable monitoring workloads. Utilizing today’s technology and greater sharing of data and information will not only make monitoring systems more efficient but will also enable greater resource targeting that is data-driven. With cross-training and MOUs, it is possible to achieve greater efficiencies across agencies.

Early care and education programs are more complicated today than they were decades ago yet the system to monitor ECE programs has changed very little. It is possible to design a more efficient and cost-effective monitoring system for early learning programs. The recommendations in this policy statement are meant to foster discussion, share some innovative state practices, and help states design the next generation of monitoring policy and practice.
Appendix I:

Head Start’s Aligned Monitoring System

Following enactment of “the Improving Head Start for School Readiness Act,” (P.L. 110-134), the HHS Office of Head Start (OHS) revamped its Head Start program monitoring system. Head Start has implemented some data-driven reforms that are recommended in this statement.

Prior to the Head Start reauthorization in 2007, Head Start grantees operated under an indefinite grant period with an intensive review once every three years to ensure compliance with the Head Start Performance Standards. The new monitoring system involves program reviews conducted across the five-year grant cycle focused on a specific content area:

- Environmental Health & Safety
- Leadership, Governance, & Management Systems
- Fiscal Integrity/Enrollment, Recruitment, Selection, Eligibility, and Attendance (ERSEA)
- Comprehensive Services & School Readiness
- Teacher-Child Interactions, as addressed through the Classroom Assessment Scoring System (CLASS©) observation instrument

The new Aligned Monitoring System (AMS) takes into account compliance and quality by using a program’s track record to determine the intensity of monitoring. The AMS provides two different approaches to monitoring based on a grantee’s history: the Comprehensive Monitoring Process and the Differential Monitoring Process.

The Comprehensive Review involves the five content-focused assessments in the first three years of the grant. The Differential Monitoring process focuses on a shorter list of key indicators selected from the Comprehensive Monitoring tool. Grantees with a strong track record of compliance receive the shorter, key indicator review. If they are in compliance, the Office of Head Start will only monitor the Environmental Health and Safety and CLASS© during the grant cycle. If they are not compliant, they will receive a Comprehensive Monitoring review. For grantees with findings or deficiencies, a corrective action plan is put into place and OHS staff work with grantees to come into compliance. Targeted technical assistance is provided. A follow up review is conducted to ensure that identified findings have been addressed.
Finally, the Office of Head Start has increased transparency and partnership with grantees, which has helped transform the culture from one of compliance anxiety to continuous quality improvement. To assist grantees in better understanding the areas that will be monitored, OHS has developed an online “Aligned Monitoring Virtual Expo.” The on-line expo describes specific content areas that will be reviewed, allows grantees to access videos and supporting information, and offers grantees an opportunity to ask questions. The transparency of the information has helped reduce the anxiety and mystery associated with the monitoring process so that grantees can be successful. Revamping the monitoring process and creating greater transparency with regard to standards and monitoring tools has helped transform the culture and helped to promote a link between monitoring and quality practices (rather than a focus on the negative).

While Head Start programs are federally funded, they are required to be licensed by states (or meet comparable standards) and participate in CACFP. In addition, many Head Start programs participate in state quality rating and improvement systems. Therefore, in addition to the federal aligned monitoring system, programs are also subject to other inspections. With greater sharing of information, duplication in monitoring could be avoided.

The Child and Adult Care Food Program (CACFP) Monitoring System

Through USDA, CACFP provides reimbursement for meals and snacks in child care, Head Start, and other early childhood settings serving low income children. Child care home providers and affiliated and unaffiliated centers are required to operate under a sponsoring organization. Independent centers are not required to participate under a sponsoring organization. Instead, they can conduct their own administrative tasks and participate directly under a state agency.

State agencies must annually review at least 33.3 percent of all programs. Independent centers and sponsoring organizations with 1 -100 facilities must be reviewed at least once every 3 years. Such reviews must include reviews of 10 percent of the sponsoring organization’s programs. Sponsoring organizations with more than 100 facilities must be reviewed at least once every 2 years. Such reviews must include at least 5 percent of the first 1,000 facilities and 2.5% of the remainder in excess of 1,000. Sponsoring organizations of homes or centers must visit programs at least 3 times per year. Programs participating in CACFP must be licensed. If licensing is not required by state agencies, USDA offers some flexibility on alternative approval, including a minimum set of standards for health and safety that are part of CACFP regulations for use when licensing and alternative approval is not available. The state agency requires submission of health/sanitation and fire/safety permits or certificates for all independent centers and programs seeking alternate child care standards approval.
Child and Adult Care Food Program (CACFP) Monitoring
State Agency Reviews & Sponsoring Organization Reviews

**State Agency Monitoring**
Large Sponsors (100+)
- **Sponsoring organizations with more than 100 facilities**: Must be reviewed at least once every 2 years. The review of the sponsoring organization must include reviews of 5% of the first 1,000 facilities and 2.5% of the facilities in excess of 1,000.
- **New sponsoring organizations of 5 or more facilities must be reviewed within the first 90 days of operation.**

State Agencies

**State Agency Monitoring**
Small Sponsors (1-100) & Independent Centers
- **Independent Centers & Sponsoring Organizations of 1-100 facilities**: Must be reviewed once every 3 years. The review of the sponsoring organization must include reviews of 10% of the sponsoring organization’s facilities.

**Sponsoring Organizations**

- **100+ facilities**
  - Family Child Care Homes
  - Child Care Centers

- **1-100 facilities**
  - Family Child Care Homes
  - Child Care Centers

U.S. Military Child Care Monitoring Framework

The Department of Defense operates the nation’s largest employer-sponsored child care system assisting 200,000 children of military families every day. At the core of the military’s support for child care: high quality standards and enforcement of those standards, workforce preparation, parent engagement, and affordable access. However, the military child care system was not always the model it is today.

A 1982 U.S. General Accounting Office (GAO) study found that many military child care programs “currently in use are neither safe nor suitable places for child care programs.” The majority of the Army child care facilities did not meet fire and safety codes. The majority of Navy facilities needed upgrading to comply with fire, safety, and sanitation standards. One-fifth of Air Force programs needed improvements and additional facilities were needed to meet Marine Corps demand. A 1989 GAO study found extensive and growing demand for child care and deemed child care services to military families as an “essential service” and “mission critical.”

The GAO reports, a series of public scandals involving military care, and parent demand fueled Congressional hearings and ultimately enactment of the Military Child Care Act of 1989 (P.L. 101-189), which called for the military to establish a comprehensive cross-system (i.e., Army, Navy, Marine Corps, and Air Force) of health and safety regulations, training for the workforce, and an enforcement system including quarterly unannounced inspections as well as tough sanctions for noncompliance.

The military monitoring system was developed as a monitoring system of checks and balances with each level responsible for ensuring that monitoring is completed as required, objective, and comprehensive.

- At the installation or community level, each installation is required to conduct quarterly inspections of its’ Child Development Programs.
- Each Major Command (a group of installations with common missions) then must conduct at least one unannounced monitoring visit to each installation within its’ command per year.
- Each Military Service (Army, Navy, Marine Corps and Air Force) must then conduct at least one unannounced inspection of one installation within each command.
- Finally, the Department of Defense (DoD) selects one installation within each Military Service to conduct an unannounced inspection with the goal of ensuring appropriate oversight within each service.

The system is designed to ensure comprehensive, objective monitoring that is conducted at each level within the system.

At the installation level, the quarterly inspections include health and sanitation, fire and safety, program quality and overall compliance against standards by a multidisciplinary team. Each team includes a parent representative. Each service branch’s headquarters also conducts an annual inspection.

Although DoD has its own child care system, it depends on state policies and practice to meet the needs of military families who cannot access on installation care.
ACF’s National Center on Early Childhood Quality Assurance (ECQA) supports state and community leaders in devising innovative models to promote more effective monitoring systems among quality initiatives. The ECQA Center’s priorities include advancing strong health, safety, and quality standards and licensing regulations within states and territories. ECQA Center staff have developed resources and tools that address two main areas of child care licensing: policies and practices (e.g., monitoring, enforcement, and licensing staff development), and program requirements.

The Health and Safety and Licensing topic page on the Early Childhood Training and Technical Assistance System website includes issue briefs, research reports, and other resources. The page is available at https://childcareta.acf.hhs.gov/topics/health-and-safety-and-licensing. Highlights include three series of briefs:

- Nine topical briefs about health and safety requirements
- Three research briefs about national trends in child care licensing
- Eight issue briefs about contemporary issues in licensing

Technical assistance tools include the following:

- **The National Database of Child Care Licensing Regulations** is a repository of State and Territory licensing regulations and agency contact information. It is organized by State/Territory and allows users to access child care licensing regulations that apply to child care centers, family child care homes, school-age programs, infant care programs, and other specialized programs. In addition, website links are provided for other early childhood programs standards, such as quality rating and improvements system (QRIS) standards, prekindergarten program requirements, and state health and safety requirements for child care providers receiving payment from the federal Child Care and Development Fund. https://childcareta.acf.hhs.gov/licensing

- **The CCDF Data Explorer** contains State-level data about licensing requirements and is available on the ECTTA website. Child Care and Development Fund (CCDF) data include child-staff ratios and group sizes, criminal background checks, minimum preservice qualifications, ongoing training hours, and types and frequency of routine licensing inspections. https://childcareta.acf.hhs.gov/data

- **The National Program Standards Crosswalk Tool** is prepopulated with national early childhood program standards (such as Head Start, accreditation, Caring for Our Children). It is designed to help States that are developing and aligning program standards for licensing, QRIS, or prekindergarten programs to search and compare the content of several sets of national standards. https://occqrisguide.icfwebservices.com/index.cfm?do=crosswalk

Additional information and resources from the ECQA Center are available at https://childcareta.acf.hhs.gov/quality-improvement.
42 April 14, 2016 Early Care and Education Consortium (multi-site child care centers)
April 14, 2016 National Head Start Association (grantees and delegate agencies)
April 15, 2016 Child Care Aware of America (Child Care Resource & Referral Agencies)
April 18, 2016 National Association of Family Child Care (family child care homes)
April 28, 2016 USDA Food & Nutrition Service/State Agencies (State agencies administering CACFP)
May 2, 2016 USDA Food & Nutrition Service/Sponsors (Sponsoring agencies for CACFP)
May 23, 2016 National Association for Regulatory Administration (state licensing officials)
May 23, 2016 Migrant and Tribal Head Start Programs (grantees)
43 Meetings with USDA and ACF staff, July and August 2016.


http://decal.ga.gov/

http://earlychildhood.marylandpublicschools.org/


http://www.michigan.gov/mdn/0,4615,7-140-63533---,00.html

http://ncchildcare.dhhs.state.nc.us/general/mb_ncprek.asp

http://www.education.pa.gov/Early%20Learning/Pages/default.aspx#tab-1

http://dfc.vermont.gov/cdd

https://www.del.wa.gov/4


Ibid.


32

FY2015 CCDF QRIS Performance Data and FY2016-FY2018 CCDF State Plans


Ibid.


Ibid.


Ibid.

Ibid.

Ibid.


Ibid.

Ibid.


Ibid.

Ibid.

Ibid.

Ibid.


Ibid


33
Use of Technology to Enhance Licensing Administration. National Center on Child Care Quality Improvement (2014).

Kansas, New York, Florida and Texas developed their data systems internally. Other states have contracted with SansWrite or TCC Software Solutions.


http://www.naccrra.net/sites/default/files/publications/naccrra_publications/2012/child_care_like_the_military.pdf


Ibid.


VALIDATION OF QUALITY RATING AND IMPROVEMENT SYSTEMS FOR EARLY CARE AND EDUCATION AND SCHOOL-AGE CARE
DISCLAIMER:
The views expressed in this publication do not necessarily represent the views or policies of the Office of Planning, Research and Evaluation, the Administration for Children and Families or the U.S. Department of Health and Human Services.

ACKNOWLEDGMENTS
The authors would like to thank Ivelisse Martinez-Beck and Naomi Goldstein at the Office of Planning, Research and Evaluation, Kathryn Tout at Child Trends, and Laura Hamilton at RAND for their guidance and feedback on this paper.
Validation of Quality Rating and Improvement Systems for Early Care and Education and School-age Care

Research-to-Policy, Research-to-Practice Brief  OPRE2012-29

April 2012

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Suggested Citation:

This Brief was developed by members of the Quality Initiatives Research and Evaluation Consortium (INQUIRE) which is designed to facilitate the identification of issues and the development and exchange of information and resources related to research and evaluation of quality rating and improvement systems (QRIS) and other quality initiatives. INQUIRE is funded by the Office of Planning, Research and Evaluation through the Child Care and Early Education Policy and Research Analysis and Technical Expertise contract with Child Trends.
Validation of Quality Rating and Improvement Systems for Early Care and Education and School-age Care

Quality Rating and Improvement Systems (QRIS) for early care and education and school age care programs are designed to collect information about quality and to use that information to produce program-level ratings, which are the foundation of a QRIS. The ratings are intended to make program quality transparent for parents and other stakeholders and to encourage the selection of higher-quality programs. The ratings also provide benchmarks that can support efforts to help programs improve their quality. **Validation of a QRIS is a multi-step process that assesses the degree to which design decisions about program quality standards and measurement strategies are resulting in accurate and meaningful ratings.** Validation of a QRIS provides designers, administrators and stakeholders with crucial data about how well the architecture of the system is functioning. A carefully designed plan for ongoing validation creates a climate that supports continuous quality improvement at both the program and system level.

To date, QRIS validation efforts have been limited. One reason may be that validation is a complex endeavor that involves a range of activities. In addition, there has been little guidance available that clarifies the purpose of QRIS validation or identifies the activities that comprise validation. At the same time, there is growing pressure to validate these systems as stakeholders seek evidence that QRIS are functioning as intended. The federal government has elevated QRIS validation by including it as a central component of the 2011 Race to the Top Early Learning Challenge and requiring state applicants to develop QRIS validation plans as part of their submissions.

The purpose of this Brief is to help QRIS stakeholders better understand validation and to outline a set of complementary validation activities. The Brief defines validation, describes different types of validation studies, and provides guidance on developing a validation plan, including tools to determine the appropriate scope and timing of validation activities. It also lists references and resources for those who wish to learn more. This Brief is aimed at readers in positions to authorize, finance, design, and refine QRISs and other quality improvement efforts, including state child care administrators, early education policy and program specialists, legislators, and other potential funders.
QRIS Validation and Its Role in Continuous System Improvement

Validation is a multi-step process that assesses the degree to which design decisions about QRIS program quality standards and measurement strategies are resulting in accurate and meaningful program ratings. Validation is particularly important for QRISs because these systems at their core rely on ratings of program quality. They are built on the assumption that the quality of early childhood and school-age programs can be reliably measured and that differences in quality across these programs can be identified through the use of a set of quality indicators. Validity data can support conclusions about whether such quality indicators measure quality well and whether the strategies used to combine measures and develop ratings are working as intended (Cizek, 2007). Valid ratings are critical to QRISs because parents and other stakeholders use these ratings to select the highest-quality care that they can afford. The overall quality rating also carries increasingly high stakes for programs. Indeed, the theory underlying QRISs intentionally creates those stakes to motivate both provider and parent behaviors in support of increased quality (e.g., Zellman et al., 2008; Zellman et al., 2011). In addition to attracting more children, programs that score well may receive higher subsidies for subsidy-eligible children, and may qualify for grants, incentives, and tax credits.

Validity is not determined by a single study; instead, validation should be viewed as a continuous process with multiple goals: refining the ratings, improving system functioning, and increasing the credibility and value of rating outcomes and of the QRIS system as a whole. A carefully designed validation plan will promote the accumulation of evidence over time that will provide a sound theoretical and empirical basis for the QRIS (AERA, APA, & NCME, 1999; Kane, 2001). Ongoing validation activities that are carried out in tandem with QRIS monitoring activities (that aim to examine ongoing implementation of the QRIS) and evaluation activities (that examine the outcomes of QRIS) can help a QRIS improve its measures and effectiveness throughout its development and implementation (see Lugo-Gil et al., 2011 and Zellman et al., 2011 for guidance on developing a comprehensive QRIS evaluation).

Why QRIS validation is important. A QRIS is a primary strategy states employ to improve early childhood education and school-age care (ECE-SAC) program quality. Because ratings are a central element of a QRIS, it is important to collect data to establish that these ratings are accurate and meaningful indicators of quality. Validation studies can lend credibility to a QRIS, identify needed changes, and support continuous improvement of a QRIS.

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1 The definition of validation has changed over time. Rather than identifying separate types of validity (construct, predictive, face, concurrent and content), the current notion is that construct validity includes all evidence for validity, including content and criterion evidence, reliability, and the wide range of methods associated with theory testing (Messick, 1975, 1980; Tenopyr, 1977; Guion, 1977; Embretson, 1983; Anastasi, 1986). As a consequence, we do not differentiate types of validity in this brief.

2 Reliability represents the ability of a measure to assess its target behaviors or characteristics consistently. In the case of QRISs, reliability refers to the extent to which independent raters produce similar ratings on individual QRIS elements and on the summary rating (inter-rater reliability) as well as the degree to which raters are consistent over time in their ratings (intra-rater reliability). Such consistency is a prerequisite for validity of any measure.
QRIS validation activities may produce three important benefits. First, validation evidence can promote increased support for the system among parents, ECE-SAC providers and other key stakeholders. Ratings that match the experiences of parents and providers can build trust in the ratings and increase the overall credibility of the system. Second, a system that is measuring quality accurately is better able to target limited quality improvement supports to those programs and program elements most in need of improvement. Third, validation evidence can be used to improve the efficiency of the rating process. If a QRIS is expending resources to measure a component of quality that is not making a unique contribution to a summary quality rating or that is not measuring quality accurately, it can be removed or revised. For example, measures that vary little if at all across providers whose quality varies substantially in other ways make little or no contribution to quality ratings. Measures of family engagement that include parent ratings are particularly prone to this problem, as parents who have chosen to use and continue to rely on a given provider are highly likely to see the care as good and to rate it according to their views (Zellman and Perlman, 2006; McGrath, 2007; Keyes, 2002; Kontos et al., 1987; Shimoni, 1992). If all or almost all programs receive high ratings on the family engagement measure, then that component of the rating may not be working to distinguish between lower-quality and higher-quality programs. It may be considered important to collect measures of family engagement to ensure that providers continue to focus on it. But knowing that a given measure is not contributing to an overall program quality rating may motivate program developers to consider another way to measure the concept, which might both increase the value of the measure and reduce measurement costs. Indeed, understanding the relationships among rating elements through validation studies can save substantial time and effort.

Despite the importance of validation activities to strengthen QRIS, support for these activities may be impeded by limited resources and concern about the value of validation activities. In states with more mature QRISs, there may be reluctance among stakeholders to assess an established system. In newer systems, policymakers may question the need for validation given the arguments recently offered in support of establishing the system. Validation plans can address each of these concerns by providing evidence to help the system run more efficiently and to establish a climate of continuous improvement. A validation plan will clarify that the system is open to change, intent on improvement, and dedicated to increasing the odds of reaching its goals.

**Designing and Implementing Validation Efforts**

A comprehensive validation plan includes multiple studies that rely on different sources of information and ask different but related questions. These can be understood and organized around four complementary and interrelated approaches to validation. In this section we provide details of the four approaches. Summaries of these details are provided in two tables. Table 1 presents an overview of the four approaches including the purpose of each approach, the activities that might be undertaken, the questions that are asked and the limitations of each approach. Table 2 presents the data needed, data sources, and analysis methods for selected studies within each approach.3

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3 The four basic approaches described in the table are very similar to and compatible with those used in the QRIS Evaluation Toolkit (Lugo-Gil et al., 2011).
When reviewing the tables and the remainder of the Brief, it is helpful to be familiar with how three key QRIS terms – component, standard and indicator – are defined. The term quality **component** refers to the broad quality categories used in QRIS (such as staff qualifications, family engagement, and the learning environment). A quality **standard** is defined as a specific feature of quality such as specialized curriculum and assessment training in the staff qualifications component; a set of quality standards comprise each quality component. Quality **indicators** are metrics that can be measured or verified for each of the quality standards. A given quality standard could have one or multiple quality indicators that represent it in a QRIS. For example, in the category of staff qualifications, a standard may be “Teaching staff have specialized training in curriculum and assessment.” An indicator related to this standard may be “At least 50% of teaching staff have completed the two-course statewide curriculum training session on curriculum and assessment.”

Table 1. Four Related Approaches to Validating a QRIS

<table>
<thead>
<tr>
<th>Approach</th>
<th>Activities and Purpose</th>
<th>Typical Questions Approach Addresses</th>
<th>Issues and Limitations</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. <strong>Examine the validity of key underlying concepts</strong></td>
<td>Assess whether basic QRIS quality components and standards are the “right” ones by examining levels of empirical and expert support.</td>
<td>Do the quality components capture the key elements of quality? Is there sufficient empirical and expert support for including each standard?</td>
<td>Different QRISs may use different decision rules about what standards to include in the system.</td>
</tr>
<tr>
<td>2. <strong>Examine the measurement strategy and the psychometric properties of the measures used to assess quality</strong></td>
<td>Examine whether the process used to document and verify each indicator is yielding accurate results. Examine properties of key quality measures, e.g., inter-rater reliability on observational measures, scoring of documentation, and inter-item correlations to determine if measures are psychometrically sound. Examine the relationships among the component measures to assess whether they are functioning as expected. Examine cut scores and combining rules to determine the most appropriate ways to combine measures of quality standards into summary ratings.</td>
<td>What is the reliability and accuracy of indicators assessed through program administrator self-report or by document review? What is the reliability and accuracy of indicators assessed through observation? Do quality measures perform as expected? (e.g., do subscales emerge as intended by the authors of the measures?) Do measures of similar standards relate more closely to each other than to other measures? Do measures relate to each other in ways consistent with theory? Do different cut scores produce better rating distributions (e.g., programs across all levels rather than programs at only one or two levels) or more meaningful distinctions among programs?</td>
<td>This validation activity is especially important given that some component measures were likely developed in low-stakes settings and have not been examined in the context of QRIS.¹</td>
</tr>
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<td>Approach</td>
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<td>3. Assess the outputs of the rating process</td>
<td>Examine variation and patterns of program-level ratings within and across program types to ensure that the ratings are functioning as intended. Examine relationship of program-level ratings to other quality indicators to determine if ratings are assessing quality in expected ways. Examine alternate cut points and rules to determine how well the ratings distinguish different levels of quality.</td>
<td>Do programs with different program-level ratings differ in meaningful ways on alternative quality measures? Do rating distributions vary by program type, e.g., ratings of center-based programs compared to ratings of home-based programs? Are current cut scores and combining rules producing appropriate distributions across rating levels?</td>
<td>These validation activities depend on a reasonable level of confidence about the quality components, standards and indicators as well as the process used to designate ratings.</td>
</tr>
<tr>
<td>4. Examine how ratings are associated with children’s outcomes.</td>
<td>Examine the relationship between program-level ratings and selected child outcomes to determine whether higher program ratings are associated with better child outcomes.</td>
<td>Do children who attend higher-rated programs have greater gains in skills than children who attend lower-quality programs?</td>
<td>Appropriate demographic and program level control variables must be included in analyses to account for selection factors. Studies could be done on child and program samples to save resources. Findings do not permit attribution of causality about QRIS participation but inferences can be made about how quality influences children’s outcomes.</td>
</tr>
<tr>
<td>Approach</td>
<td>Data needed</td>
<td>Data sources</td>
<td>Analysis methods</td>
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</tr>
<tr>
<td><strong>1. Examine the validity of key underlying concepts</strong></td>
<td>Evidence about the relationship between key quality standards and desired outcomes.</td>
<td>Experts in early childhood education who can provide input on the quality standards and indicators.</td>
<td>Synthesis of available data relating to each component; Analysis of degree to which evidence meets criteria for relatedness; Consensus process; Decision rules that specify the value of components without an established evidence base.</td>
</tr>
<tr>
<td></td>
<td>Expert opinions about proposed quality standards and indicators.</td>
<td></td>
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<tr>
<td><strong>2. Examine the measurement strategies and psychometric properties of the measures used to assess quality.</strong></td>
<td>Rating data from participating programs.</td>
<td>Most such data are collected as part of program ratings.</td>
<td>Distribution of provider scores on a given component; Correlations among components; Correlations of selected components with other measures.</td>
</tr>
<tr>
<td></td>
<td>Data from additional quality measures.</td>
<td>Additional quality measures may be collected to allow comparisons with measures being used in the QRIS.</td>
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<tr>
<td><strong>3. Assess the outputs of the rating process</strong></td>
<td>Program-level ratings from participating programs.</td>
<td>Most of the necessary data are collected as part of program ratings.</td>
<td>Examination of rating distributions by program type; Correlations of program ratings with other measures; Changes in rating distributions using different cut scores.</td>
</tr>
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<td></td>
<td>Raw scores from measures of quality that are included in the rating.</td>
<td>Another measure of quality may be administered to allow comparisons with program ratings.</td>
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<tr>
<td></td>
<td>Data from additional quality measures that are not included in the rating.</td>
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<tr>
<td><strong>4. Relate ratings to expected child outcomes.</strong></td>
<td>Program rating data from participating programs.</td>
<td>Program rating data are collected as part of program ratings.</td>
<td>Estimate the relationship between program ratings and child outcomes.</td>
</tr>
<tr>
<td></td>
<td>Assessments of child functioning.</td>
<td>Trained, reliable independent assessors collect data from individual children (may be a designated sample).</td>
<td></td>
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<td></td>
<td></td>
<td>Teacher reports on individual children.</td>
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</table>

**Approach 1: Examine the validity of key underlying concepts.** This approach involves examination of the elements or concepts that are to be included in program ratings. It is an important validation activity because it provides the foundation for the quality components, standards and indicators that together will produce program-level ratings and that will be the focus of quality improvement activities. Together, the components included in ratings, (e.g., staff qualifications, learning environment, family engagement) define quality for the QRIS. This validation activity provides justification and support for the elements of the QRIS. If the examination includes stakeholders, the process can also promote buy-in for the QRIS.
This validation approach asks whether quality components, standards and indicators included in a QRIS are the “right” ones, and is similar to what is proposed in the Toolkit, under Validating Quality Standards (Lugo-Gil et al., 2011). Because this effort addresses the cornerstone concepts and measures of the QRIS, it ideally would be conducted prior to the implementation of the QRIS.

For QRISs, the key concept is quality of care. The quality of care in early childhood education and school-aged care (ECE-SAC) programs is a complex, multi-dimensional construct; this complexity is amplified in centers by the fact that programs are comprised of multiple classrooms staffed by multiple individuals. Quality can be operationalized using a number of specific quality components. However, most QRISs have adopted similar ones. The QRIS Compendium found that six quality components were included in the majority of the 26 QRIS that were examined (Tout et al., 2010). These categories include licensing compliance (26 QRISs), classroom environment (24 QRISs), staff qualifications (26 QRISs), family partnership (24 QRISs), administration and management (23 QRISs) and accreditation (21 QRISs). Three categories—curriculum (14 QRISs), ratios and group size (13 QRISs), and child assessment (11 QRISs)—are included in half or just under half of the QRISs assessed. However, while similarities exist in the general quality components included in QRISs, the way in which each of these components of quality is measured varies substantially.

One activity that can help to validate a QRIS’ underlying concepts involves assessing the degree to which the quality components in the QRIS rating include standards and indicators that have an empirical base linking them to key program, family and child outcomes. This assessment might include an examination of the degree to which each element as operationalized in the QRIS is viewed by experts as a valid measure of the component. A number of states (including Delaware, Rhode Island, Minnesota and Virginia) have used a systematic expert review process to help identify which quality components (and the standards and indicators that comprise each component) to include in their QRIS. Attention might also be paid to the views of programs and parents about the degree to which selected components reflect their priorities. For example, focus groups with parents were conducted in Minnesota to inform the development of the final rating tool used in the QRIS pilot (Minnesota Department of Education and Minnesota Department of Human Services, 2007).

Another activity which is part of this approach involves examining the research literature to determine the level of empirical support for each proposed component. This review would examine the research base on the proposed standards and indicators selected to represent program quality. The review would weigh the existing evidence and provide arguments for why a particular quality component should be included or excluded from the QRIS.

Purdue University’s scientific review of the quality standards contained in Paths to Quality, Indiana’s QRIS, demonstrates this approach. The overall goal of the review was to conduct an “external evaluation of the scientific validity” of the Paths to Quality standards (Elicker et al., 2007). The study included review of available evidence for the importance of each of the four quality components—Health and Safety, Learning Environment, Planned Curriculum, and National Accreditation—and the relationship of the standards and indicators of each component to other measures of quality and to children’s development and well-being. The review used standards of evidence to classify each proposed indicator. For example, one or two well-designed studies that supported the indicator was classified as “some evidence;” “substantial evidence” required more than five such studies. For three-quarters of the indicators, researchers found “substantial evidence” that they supported children’s development.
Like many validation activities, such reviews ideally would be updated from time to time to determine if revisions to the QRIS would be advisable in light of new research findings. Such a review might utilize such tools as the *QRS Compendium* (Tout et al., 2010) or *Caring for Our Children* (AAP/APHA/NRC, 2011) as well as other recently published findings.

**Approach 2: Examine the measurement strategies and the psychometric properties of the measures used to assess quality.** A second type of validation effort focuses on the attributes of the individual measures in the QRIS as well as on the way in which the measures are combined to produce the summary rating of program quality. This approach is similar to what is discussed in the QRIS Evaluation Toolkit under *Validating the Construction of Quality Levels* (Lugo-Gil et al., 2011). This approach addresses how well the measures are working in the context of the QRIS. These efforts ask questions such as, “is there evidence that a given indicator measures what it purports to measure?” “If it claims to have a specific number of dimensions, do we find those dimensions in our data?” “Is there sufficient variance in scores on this indicator to justify its inclusion in the QRIS?” “Do scores on the indicator covary in expected ways with other measures of quality?”

Efforts to address these issues might involve an assessment of the distribution of participating provider scores on a given rating element. For example, in Zellman et al.’s (2008) evaluation of Colorado’s QRIS, initial work revealed that the measure of family engagement then in use produced very little variation across programs; all programs achieved the highest score possible on this measure. This meant that the QRIS was expending substantial resources to collect data on a measure that did not differentiate among programs. Another validation activity might involve an assessment of the relationship of a given indicator to other indicators of quality, both those included in the QRIS and others. In such studies, it is important to look at the degree of correlation found: ideally, measures would be moderately correlated so that each measure provides some non-redundant program quality information (see Zellman et al., 2008 for an example). Correlation patterns also should make sense. For example, two measures of interaction quality should be more closely related to each other than to a measure of ratios. If such studies reveal for example that the correlation between ratios and interaction processes is very high, this result might argue for eliminating one or the other indicator from the QRIS, as they may not be providing additional information (although some QRISs include certain elements to ensure that they are paid attention to, even if their psychometric properties are not ideal).

The research literature provides limited guidance concerning the most appropriate ways to combine measures of quality elements into summary ratings (Lugo-Gil et al., 2011; Tout et al., 2009; Zellman et al., 2008). Yet this process is crucial to producing meaningful program quality ratings, which are the key output of the rating process. States that are collecting and combining data could use these data to conduct studies that examine the effects of altering cut scores or combination rules, much as Karoly and Zellman (2012) have done in a “virtual pilot” for California’s QRIS, using data collected for another purpose, or as was done in studies in Minnesota (Tout et al., 2011) and Kentucky (Isner et al., 2012). These efforts will help QRIS designers and policy makers consider how well indicators are working, which indicators appear to be picking up variations in quality, and how closely different indicators relate to each other.

A number of other existing studies examine the properties of proposed QRIS indicators and can provide guidance to QRIS validation efforts (Scarr, Eisenberg, & Deater-Decker, 1994; Zellman & Perlman, 2008; Tout et al, 2011; McWayne & Melzi, 2011). Additionally, tools exist to help QRIS stakeholders review the options for QRIS measures and to support decision-making about the inclusion of new measures. For example, a Quality Measures Compendium is available and updated on a regular basis (Halle, Vick-Whittaker, & Anderson, 2010). If promising new measures are developed, it might be worthwhile to examine the performance of a new measure against the measure in current use.
Approach 3: Assess the outputs of the rating process. A third validation approach focuses on assessing the outputs of the rating system: the scores and levels that are assigned to providers who undergo a rating. Studies conducted under this approach examine the degree to which the quality levels in the QRIS are meaningfully distinct from each other. The results of these studies may indicate that measures, cut scores, or rules for combining measures need changing in order to distinguish quality levels effectively. Because these studies can result in proposals for significant changes to the composition of QRIS levels, it is helpful for these studies to occur prior to studies that examine associations between quality levels and children’s development.

Output studies may focus on individual indicator scores, such as how providers score on an environmental rating, as well as on the program-level score that is the final output of the rating process. Studies conducted as part of this approach ask questions like, “are providers that received four stars actually providing higher quality care than those that earned three stars?” Studies using this approach may also address questions about cut scores, e.g., “do different cut scores produce dramatically different program-level ratings, and if so, which cut scores produce distributions that most closely relate to other measures of quality?” These studies typically rely on a measure of quality not included in the QRIS to make this assessment, and examine whether assessments on both measures vary in predictable ways.

The University of Southern Maine is conducting a validation study of Maine’s QRIS to assess similarities and differences across program ratings; the study is also examining what if any differences exist between similar types of programs at different step levels (see Lahti et al., forthcoming, for further details on this study and several others.) For example, researchers in Maine administer the Environment Rating Scales (ERS; Harms & Clifford; 1989; Harms, Clifford & Cryer, 2005; Harms, Cryer & Clifford, 2006; Harms, Cryer & Clifford, 2007), which are not used to establish a rating in Maine’s QRIS, and examine whether there are statistically significant differences in ERS scores between programs at different rating levels. These findings help program designers determine if the quality levels determined by QRIS ratings relate in expected ways to an external measure of global quality.

As a second example of validation studies using this approach, Karoly and Zellman (2012) used data collected for another purpose to model some of the features of a newly-designed California QRIS. The data come from a 2007 survey of center-based providers that is representative of the state. Observations were conducted in 251 centers serving children birth to 5. The purpose of this “virtual pilot” study was to determine the likely distribution of programs across QRIS tiers using specified cut points, examine the association among quality components, and to identify “outlier” quality elements on which otherwise well-rated programs tend to score poorly. This information is very valuable at the design phase; data on “outlier” elements is particularly helpful in understanding what it will take for programs to improve their rating in a QRIS that uses a block design to designate ratings (in which all indicators at one level must be met before a rating at the next level is possible). By examining such things as the relationship between scores on the Classroom Assessment Scoring System (CLASS; Pianta, La Paro & Hamre, 2008) and the Early Childhood Environment Rating Scale Revised (ECERS-R; Harms, Clifford & Cryer, 2005), and the relationship between staff education and training and other measures of quality, the work can help policymakers assess the value of different measures of quality, provide input into establishing cut scores, and suggest targets for technical assistance efforts.
Other states also have conducted validation studies that focus closely on differences in QRIS levels. For example, Pennsylvania has studied programs participating in the Keystone STARS QRIS (Fiene, Greenberg, Bergsten, Fegley, Carl, & Gibbons, 2002; Barnard, Smith, Fiene, & Swanson, 2006; OCDEL (Office of Child Development and Early Learning), 2010; Manlove, Benson, Strickland, & Fiene, 2011) to determine if their program ratings were indicative of quality differentials across program types and services. Similarly, recent work in Indiana (Elicker, Langill, Ruprecht, Lewsader & Anderson, 2011) found that ERS scores varied with program-level ratings, while research in Minnesota found significantly higher scores on the ERS and CLASS only between the highest level (4-star) of the QRIS and the other rating levels (2- and 3-stars) (Tout et al., 2011). These findings are being used by program developers to make needed adjustments to quality indicators, metrics and cut scores.

**Approach 4: Relate ratings to children’s development.** A fourth approach to validation focuses on children’s development. It is similar to the Toolkit’s Linkages between quality levels and desired outcomes, although it focuses more narrowly on child outcomes. For QRISs, the logic model asserts that higher quality care will be associated with better child outcomes. Therefore, one important piece of validation evidence concerns whether children make greater developmental gains in programs with higher program-level ratings than in programs with lower ratings.

Studies using this approach do not attempt to identify causal linkages between QRIS participation and children’s outcomes. Instead, they examine whether the QRIS ratings and quality components that comprise the ratings are related in expected ways to measures of children’s development. Appropriate designs and controls could allow causal inferences to be made about how quality (as measured and rated by the QRIS) influences children’s outcomes.

To date, few QRIS validation studies have incorporated children’s outcomes as they are costly and difficult to conduct. As Elicker and Thornburg (2011) note, results from such studies are mixed, at least in part because of the challenges of conducting them. A primary challenge is the inability to control for all the factors that may vary between children whose families have selected different programs. Additional challenges include recruitment of programs and children across all quality levels; availability of appropriate outcome measures for children of diverse ages, abilities, cultures and linguistic backgrounds; and, lack of variation in the quality of participating QRIS programs.

In Missouri, children who participated in programs with higher quality ratings showed significantly greater gains on measures of social-emotional development compared to children in programs with lower ratings (Thornburg et al., 2009). These effects were even more pronounced for low-income children. However, in an evaluation of Colorado’s QRIS, linkages between the ratings and children’s outcomes were not found (Zellman et al., 2008). Recent reports from Indiana (Elicker, Langill, Ruprecht, Lewsader, & Anderson, 2011) and Minnesota (Tout et al., 2011) found no consistent relationships between program ratings and measures of child outcomes. A number of possible explanations were offered for the lack of expected linkages, including overall low levels of quality in participating QRIS programs (perhaps not meeting a threshold of quality necessary to detect linkages with child outcomes; see Zaslow et al., 2010 for further discussion of quality thresholds) and a lack of variation among participating programs and families. Yet, even with these limitations, program administrators in both Indiana and Minnesota have used the findings to recommend changes to the structure and content of the QRIS.
Developing a Validation Plan

Given the complexity of validation, it is advisable to develop a plan for system validation as early as possible in the QRIS design process. Ideally, the validation plan will be part of a larger evaluation plan designed to address a wider range of important questions the answers to which will guide refinement of the QRIS and its implementation. The plan should include the key questions that will be addressed and the methods to be used to address each one. One advantage of developing a plan early is that it may highlight opportunities to conduct a number of the proposed efforts as part of the implementation of the QRIS itself or as part of planned evaluation activities. A comprehensive approach to validating a QRIS ideally will include studies under each of the four approaches described above. Table 3 outlines issues in the timing of validation studies, discusses their relative cost, and suggests strategies for addressing validation questions if resources do not permit the implementation of validation studies.

Table 3. Considerations in Developing a Validation Plan

<table>
<thead>
<tr>
<th>Approach</th>
<th>Timing and Duration</th>
<th>Cost considerations</th>
<th>Options to consider</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Examine the validity of key underlying concepts</td>
<td>Ideally conducted prior to QRIS implementation. Study should be able to be completed within 3-6 months.</td>
<td>Relatively inexpensive. This work can be contracted to a local university, consultant or research firm.</td>
<td>Many states are using similar concepts and measures; their efforts will provide useful information.</td>
</tr>
<tr>
<td>2. Examine the measurement strategies and psychometric properties of the measures used to assess quality</td>
<td>Must wait until ratings are implemented, although individual measures themselves might be available from other sources and could be examined earlier.</td>
<td>Depends on data quality and amount of analysis. Additional measures will increase costs, particularly if the measure is observational.</td>
<td>Can rely to some extent on existing research on each of the components. Consider using available data for a “virtual pilot.”</td>
</tr>
<tr>
<td>3. Assess the outputs of the rating process</td>
<td>Must wait until ratings are implemented. Once data are available, several studies could be conducted using the same data set.</td>
<td>Depends on data quality and amount of analysis. Additional measures will increase costs, particularly if the measure is observational.</td>
<td>This work is state system-dependent so is not readily borrowed, though lessons learned about structure and cut-points can be shared across QRISs.</td>
</tr>
<tr>
<td>4. Relate ratings to children’s development</td>
<td>Best to launch these studies when the QRIS rating process is stable and adequate numbers of programs have been rated.</td>
<td>Costs for the collection of child data are very high. Study could be done just with one cohort of children and two rounds of data collection (fall and spring) to assess developmental gains.</td>
<td>Requires significant funds, a powerful research design, and research expertise. Sampling children and programs will substantially reduce costs.</td>
</tr>
</tbody>
</table>
Summary and Conclusions

Validation is a complex, ongoing, iterative process. The objective of validation activities is to understand whether the rating process is able to distinguish among programs of different quality levels and whether program ratings are associated in meaningful ways to children’s outcomes.

Validation activities help to determine whether key design decisions are working well in practice. States and localities that have implemented QRISs are expending substantial resources to train raters, fund ratings, support various forms of technical assistance, and provide a range of improvement incentives. All of these efforts assume that the ratings are accurate and the system is performing as intended. QRIS design decisions often rely heavily on the judgments of experts and on colleagues in other states, because there is limited empirical data on which to base them. For this reason, it is critical for states to set in place a process for assessing how well the design decisions underlying the system are working. Validation activities do this.

Ideally, validation is an ongoing process based on a carefully designed validation plan. The plan should include all four validation approaches, although resource constraints may limit these efforts, and may particularly limit studies that include child outcomes. A good validation plan, thoughtfully developed and implemented, can provide information critical to improving the system at many points in the process, and increase the odds of its ultimate success. Validation is unquestionably challenging, but no more so than the launch and operation of a QRIS or its evaluation. The networks and references in the next section can help states develop a deeper understanding of validation approaches and help them construct and implement validation plans that address stakeholder and system needs and produce timely and valuable information.

Resources and References

Resources

INQUIRE – Quality Initiatives Research and Evaluation Consortium

The purpose of INQUIRE is to support high quality, policy-relevant research and evaluation on Quality Rating and Improvement Systems and other quality initiatives by providing a learning community and resources to support researchers and evaluators. INQUIRE also provides input and information to state administrators and other policymakers and practitioners on evaluation strategies, new research, interpretation of research results, and implications of research for practice. Research briefs are available on topics related to QRIS evaluation issues and strategies.

CCEERC – Child Care and Early Education Resource Connections
http://www.childcareresearch.org/ search under Quality Rating and Improvement Systems.

This site has many additional reports and resources, such as:


This resource list is an annotated bibliography of selected research focused on the design, implementation, and evaluation of Quality Rating Systems and Quality Rating and Improvement Systems in early childhood and after school settings.
The Child Care Quality Rating System (QRS) Assessment

Describing 26 Quality Rating Systems nationwide (19 statewide and 7 local or pilot), the Compendium presents comprehensive information through cross-QRS matrices and individual QRS profiles.


The QRS Assessment Toolkit will provide guidance, recommendations and evaluation support on a range of topics including: development of a logic model and research questions, evaluation design and methods, and selection of measures.

QRIS National Learning Network
http://qrisnetwork.org/

The Network provides information, learning opportunities, and direct technical assistance to states that have a QRIS or that are interested in developing one. Its National Resource Library assists states in learning more about QRIS and their elements and in QRIS planning. The library contains, toolkits, handouts and published documents on a variety of searchable topic areas.

The Networks’ State Resource Library contains detailed QRIS implementation information, including training guides, forms, and technical assistance materials that individual states have developed for their QRIS.

State QRIS Contacts who have agreed to serve as peer resources for one another are listed, as are Technical Assistance Providers.

Additional Resources

This report will provide case studies of four states that have undertaken validation studies in their respective states. This report provides validation and evaluation approaches, identification of similar QRIS standards amongst the four states, description of cross case analysis QRIS validity issues and the results of the validation conceptual model from this brief examining the following: concepts of quality, measures used to assess quality, outputs or scores of the rating process, and if ratings are related to expected outcomes. It is the companion document to supplement this guide in which four states validation experiences are highlighted.
References


**Endnotes**

I Validity is not attached to a measure, but to a measure used for a particular purpose in a particular context. This means that measures which may be valid for one use must be validated again for use in a different context (AERA, APA, & NCME, 1999). Measures developed in low-stakes contexts, e.g., for use in research or program self-assessments, must be validated again in high-stakes contexts because those being assessed may react in high-stakes contexts in ways that could undermine the meaningfulness of interpretations derived from those measures (AERA, APA, & NCME, 1999).

II Some components such as parent involvement have been included in QRISs even when strong empirical support of the ability of measures to distinguish among programs of different quality was lacking because designers believed that if they were not, programs would ignore these components in favor of measured ones.

III Random assignment of children to programs with different quality ratings is not possible in QRIS. Alternative analytic approaches must be used that employ adequate controls for selection bias. See Zellman and Karoly (2012) for further discussion of this approach.

IV This column recognizes that state budgets are limited and validation is rarely seen as the highest priority. Ideally, states might combine data and efforts to conduct some of these studies.

V Ideally, states might combine data and efforts to conduct some of these studies.

VI However, as noted above, measures collected in low-stakes and high-stakes settings cannot be assumed to be comparable.

VII It may be possible to use existing data to test assumptions and measures. See, for example, Karoly and Zellman (2012), for a description of such work in California.
Learning about Infant and Toddler Early Education Services (LITES): Summarizing the Research and Gaps on Compelling Models
ACKNOWLEDGMENTS

The authors wish to thank Lindsey Hutchison and Lisa Trivits, our federal project officers at the Office of the Assistant Secretary for Planning and Evaluation (ASPE), as well as Amy Madigan, Meryl Barofsky, and T’Pring Westbrook at the Office of Planning, Research and Evaluation (OPRE) in the Administration for Children and Families (ACF), for their oversight, guidance, and vision. We would also like to thank Jeanne Brooks-Gunn, Margaret Burchinal, and Ellen Kisker for their contributions to this project. In addition, we were fortunate to have the expertise of our expert panel members, whose guidance on program models for infants and toddlers was invaluable.

We also gratefully acknowledge our colleagues at Mathematica Policy Research, including Jaime Thomas and Lauren Murphy, who contributed their time, effort, and expertise to this project. Sally Atkins-Burnett and Sarah Avellar provided thoughtful quality assurance.

While acknowledging the contributions of these individuals, the authors take responsibility for any errors or omissions that remain. The views expressed in this report do not necessarily reflect those of ASPE or the U.S. Department of Health and Human Services.
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We would like to thank the following members of our expert panel for their assistance with the LITES compelling models task. The views expressed in this publication do not necessarily reflect the views of these members.

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EXECUTIVE SUMMARY

Purpose and scope of LITES

A growing body of research indicates that high quality early learning experiences can promote young children’s development (Camilli et al. 2010; Duncan and Magnuson 2013). Recent research bringing together neuroscience, child development, and economics has made the case that children’s early experiences are deeply influenced by poverty and have impacts on their cognitive, social-emotional, and physical health outcomes that extend into the school years and beyond (Camilli et al. 2010; National Scientific Council on the Developing Child 2007; Halle et al. 2009; Yoshikawa et al. 2013). These findings have emphasized the need for high quality early learning experiences for disadvantaged children that can promote development and reduce achievement gaps. Research is building about the effectiveness of preschool programs for preparing disadvantaged children for entry into kindergarten and beyond, yet less is known about effective program models to support infant and toddler early learning. Therefore, the Office of the Assistant Secretary for Planning and Evaluation (ASPE), in partnership with the Office of Planning, Research and Evaluation, within the U.S. Department of Health and Human Services, funded Mathematica Policy Research and its partners to conduct the Learning about Infant and Toddler Early Education Services (LITES) project. LITES aimed to identify replicable program models that support infant and toddler early learning in out-of-home early care and education (ECE) settings to inform future research, policy, and program directions at the federal, state, and local levels.

LITES includes two main components: (1) a systematic review to identify effective program models in out-of-home ECE settings that support infant and toddler early learning, and (2) a scan of the field for program models that are of interest (or “compelling”) for supporting these domains of infant/toddler development, but lack rigorous research examining impacts on children’s outcomes. For both components, we examined infant and toddler early learning models that targeted children’s cognitive, language, and/or social-emotional/behavioral development. For the systematic review, we conducted a comprehensive literature review to identify studies with eligible research designs, rated the quality of the studies, and examined evidence of effectiveness on children’s outcomes. In contrast, for the compelling models scan, we identified models through a nomination process and discussion with a small group of experts in the field. This report focuses on the compelling models identified in that scan. To learn more about the scope, methodology, and findings for the systematic review, please refer to Monahan et al. 2015.

Together, the two components provide a picture of available models to support infant and toddler early learning, including those with rigorous evidence of effectiveness on child outcomes and those considered compelling in the field but lacking rigorous research evidence. This latter

---

1 We developed the compelling models nomination process to identify models considered compelling by ECE experts. Because it was a nomination process, this report does not provide a representative or exhaustive list of all possible replicable program models that support infant and toddler early learning in out-of-home ECE settings and lack rigorous research.
component is a unique contribution of LITES since most systematic reviews do not include a category of models without rigorous research on the identified outcomes of interest. LITES, however, does not provide an all-inclusive review of all available infant and toddler early learning models nor the full range of descriptive research conducted on them. An exhaustive scan for all potential programs was beyond the scope of this report. For example, models in the systematic review whose studies were all rated as low quality were not considered for or included in the compelling models report. The models with only low-rated studies are described in Appendixes A and B of Monahan et al. 2015.

Methods

We defined “compelling models” as models that are viewed by the ECE field as having potential for promoting infant and toddler early learning in out-of-home settings, but have not yet been rigorously evaluated. The primary distinction between the models included in this report and those included in the LITES systematic review is the availability of research examining the impact of the models on child outcomes in the domains of language, cognition, and/or social emotional/behavioral development. To identify potential compelling models, we disseminated a call for nominations to electronic mailing lists for practitioners and researchers in ECE and related fields, and we solicited nominations directly from ECE experts. We sought well-specified models\(^2\) that included a defined package of components to support infant and toddler early learning, or professional development to help caregivers support infant and toddler early learning. Services had to broadly target infants and toddlers and/or their out-of-home caregivers; programs that narrowly targeted children with specific diagnosed disabilities or medical conditions were not included.

The nomination process yielded 21 relevant models. To prioritize them, we applied four criteria: (1) the model had at least one descriptive study of child outcomes with potentially positive findings; (2) the model had at least one impact study with positive findings on \textit{interim} outcomes (structural features of care, caregiver-child interaction, caregiver skills or knowledge of child development, or global ECE quality); (3) the model had documentation to support replication (such as training manuals or implementation guidelines); or (4) the model had been used in at least two independent sites or, for curricula, in at least five percent of Early Head Start programs.\(^3\) In consultation with ASPE, ACF, and an expert work group, we selected models that met at least two of these criteria for further examination\(^4\)

\(^2\) We defined \textit{well-specified models} as those that had: (1) clear inclusion and exclusion criteria that define the population for which the model is intended, (2) a clear description of the model components or features that must be present, and (3) clear practice guidance to promote consistency of service delivery (such as the availability of implementation guides and staff training materials, requirements for staff qualifications, or the availability of ongoing technical assistance; Fixsen et al. 2013).

\(^3\) We deemed five percent to be a reasonable cut point as the number of programs using each curricula dropped considerably below the cut point.

\(^4\) For the LITES systematic review (see Monahan et al. 2015), models were included if their studies used an eligible research design and examined impacts on specified child outcomes. Studies in the systematic review were rated based on the internal validity of the research. Studies were rated ‘low’ if they had an eligible design but did not meet review standards. Models included in the systematic review were \textit{not} eligible for consideration in this compelling
Results

Based on the prioritization criteria, LITES identified 13 compelling models to support infant and toddler early learning in out-of-home ECE settings that show potential for the field but have not yet been rigorously evaluated (Box 1). Two of the models provide direct early learning services\(^5\) to infants and toddlers; six models focus primarily on working with caregivers through coaching, modeling, or consultation to help them support infant and toddler early learning; and five models are infant/toddler curricula.\(^6\) Although the 13 models are distinct enough to warrant sorting them into these three categories, there is some unavoidable overlap. For example, the direct early learning models, as well as some curriculum models, include coaching or consultation for caregivers.

Box 1. Compelling models prioritized for inclusion in the report

<table>
<thead>
<tr>
<th>Models that provide direct early learning services to children:</th>
</tr>
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<tbody>
<tr>
<td>• Early Learning Readiness Program for Informal Family, Friend, and Neighbor Caregivers</td>
</tr>
<tr>
<td>• Educare</td>
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Models that primarily focus on professional development for caregivers:

<table>
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<th>Models that primarily focus on professional development for caregivers:</th>
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<tbody>
<tr>
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Curricula models:

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Across the 13 models, the range of target outcomes include children’s development (9 models), caregiver knowledge and skills (3 models), and environment quality (3 models; Appendix B, Table B.1). Of the nine models targeting children’s development, seven (including

\(^{(continued)}\)

models report. None of the models that only had studies rated low in the systematic review were nominated for the compelling models component. In addition, the project schedule did not allow time for the research team to add models with only low-rated studies to the list of models under consideration for the compelling models scan.

\(^5\) For LITES, we considered direct early learning services to be services targeted directly to infants and toddlers to support their early learning and intended to influence children’s cognitive, language, and/or social-emotional/behavioral development.

\(^6\) For purposes of this project, we used the definition of curriculum Epstein et al. (1996) used in their review of models of early childhood education. They defined curriculum as a set of education practices that are recommended from a specific theoretical viewpoint. Further, we focused on models that included documentation to support implementation of the practices.
all five curriculum models) target multiple domains of development, including language, cognition, and social emotional/behavioral development and two (both mental health consultation models) target only children’s social emotional/behavioral development. Although only three models specifically target caregivers’ knowledge and skills, all 13 models include supports for caregivers (such as offering training, coaching, or consultation or implementation guides and other materials) to help them support children’s development and/or improve program quality.

Within categories of models we identified common features. Specifically, the models primarily focused on professional development for caregivers were most often relationship-based, one-on-one interventions that were offered to caregivers in ECE settings and were focused on achieving specific and articulated objectives. Most of the models were intensive with services offered weekly or biweekly and substantial in duration lasting from four to six months. According to the research literature, these features may represent effective practices in professional development (U.S. Department of Education 2010). All five curricula models are linked to child assessment tools; the assessments are designed to guide caregivers in how they individualize services for children. These models also include preschool versions (some of which have been rigorously evaluated) allowing for continuity of approaches from birth to age 5 years.

The 13 compelling models we profile in this report are in different stages of development. The level of specification in the compelling models we profiled varied, both across models and across implementation components (Table ES.1). For example, all 13 models specified target populations of infants, toddlers, and/or their caregivers, as well as target outcomes for those populations. Most also had available implementation guides, training materials, and qualified trainers. Almost half of the models had fidelity standards and systems for monitoring fidelity. However, even the models with written materials to support implementation could benefit from additional guidance about the components that need to be in place to implement the model with fidelity. This would require developing standards that include minimum specifications for the model to provide consistent service delivery. For example, developers might consider not only making training available, but also setting minimum specifications for the types and levels of training required by staff implementing the model. Without this information, researchers and practitioners may not have the information they need to understand whether the model is being implemented in adherence with the developer’s specifications. In addition, in some instances a practitioner may want to adapt an existing model for use with a different population (for example, dual language learners) but have little guidance or support on how to do this.
Table ES.1. Overview of documented implementation components

<table>
<thead>
<tr>
<th>Implementation component</th>
<th>Number of compelling models</th>
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<tr>
<td>Target outcomes</td>
<td>13</td>
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<tr>
<td>Target population</td>
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</tr>
<tr>
<td>Dosage of services</td>
<td>8</td>
</tr>
<tr>
<td>Program length</td>
<td>9</td>
</tr>
<tr>
<td>Staff education requirements</td>
<td>3</td>
</tr>
<tr>
<td>Staff training requirements</td>
<td>6</td>
</tr>
<tr>
<td>Supports for implementation</td>
<td>13</td>
</tr>
<tr>
<td>Implementation/operation manuals</td>
<td>11</td>
</tr>
<tr>
<td>Training materials</td>
<td>12</td>
</tr>
<tr>
<td>Qualified trainers</td>
<td>12</td>
</tr>
<tr>
<td>Fidelity standards</td>
<td>6</td>
</tr>
<tr>
<td>Systems for monitoring fidelity</td>
<td>6</td>
</tr>
</tbody>
</table>

The model developer has specified the following:

Because we focused on identifying models that had not yet been part of an impact study to examine children’s outcomes, we anticipated finding primarily implementation or descriptive research on these models. Eight of the 13 models had at least one research study, although most had only one study (Table ES.2). None of the curricula models had existing research. Four models had studies examining implementation (Early Childhood Consultation Partnership [ECCP], Early Learning Readiness Program [ELR], Smart Support, and Seeds to Success); two models had descriptive studies measuring children’s outcomes (Educare and Smart Support); and four models had descriptive studies of interim outcomes (ELR, Educare, First Beginnings, and Smart Support). The research also included three randomized controlled trials (RCTs) measuring interim outcomes (Expanding Quality in Infant Toddler Care and EQ RELATE coaching model, Infant Caregiver Mentoring Project, and Seeds to Success). At the time this report was written, impact studies examining child outcomes were also under way for two models: ECCP and Educare. Because results were not yet available for these impact studies, however, these two models were not included in the LITES systematic review. Across the five descriptive and three impact studies of interim outcomes, the outcome domains measured included observed quality.

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7 We only report findings from studies that focused on infants and toddlers and their caregivers. Specifically, we report findings on children’s outcomes for infants and toddlers, or interim outcomes for infant and toddler caregivers or settings where infants and toddlers received care (structural features of care, caregiver-child interaction, caregiver skills or knowledge of child development, or global ECE quality). We include findings from implementation studies if they reported on care settings for infants and toddlers.

8 These models were not eligible for the LITES systematic review because the impact studies measured only interim outcomes. To be eligible for the systematic review, the models had to have eligible research designs examining the impact of the models on child outcomes in the domains of language, cognition, and/or social emotional/behavioral development.
(seven studies) and caregiver knowledge and skills (four studies). Across the two descriptive studies of child outcomes both measured social-emotional/behavioral development and one also measured school readiness and vocabulary. The three models with impact studies of interim outcomes were all professional development models; the findings pointed to the potential of these models to improve observed quality and increase caregiver knowledge and skills.

**Table ES.2. Overview of research on compelling models, by study type**

<table>
<thead>
<tr>
<th>Model</th>
<th>Implementation study</th>
<th>Descriptive study: child outcomes</th>
<th>Descriptive study: interim outcomes</th>
<th>Impact study: interim outcomes</th>
<th>Impact study underway: child outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Early Childhood Consultation Partnership (ECCP)</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
<td>✓b</td>
</tr>
<tr>
<td>Early Learning Readiness (ELR) Program</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Educare</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
<td>✓c</td>
</tr>
<tr>
<td>Expanding Quality in Infant Toddler Care (EQIT) course and EQ RELATE Model of Coaching</td>
<td></td>
<td></td>
<td>✓d</td>
<td></td>
<td></td>
</tr>
<tr>
<td>First Beginnings</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>Infant Caregiver Mentoring Project</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>✓f</td>
</tr>
<tr>
<td>Seeds to Success</td>
<td>✓</td>
<td>✓g</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Smart Support</td>
<td>✓</td>
<td>✓g</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Interim outcomes are those other than child outcomes that are thought to be related to child development. For LITES, this included the following domains: global ECE quality, structural features of care, caregiver-child interaction, and caregiver knowledge of child development.

Results from a small pilot impact evaluation of ECCP became publically available in December 2014, after the analyses for the LITES systematic review and compelling models profiles were complete.

Data collection is in progress for the first phase of an impact study on Educare, which follows children through age 3; the youngest children in the study turn 3 in September 2015.

The study of EQIT included comparison groups of convenience. Within the EQIT intervention group, participants were randomly assigned to receive different amounts of coaching.

First Beginnings and the Infant Caregiver Mentoring Project are not currently active. After the Seeds to Success demonstration period concluded, it was used to develop a new system called Early Achievers, which is currently in operation.

The study of the Infant Caregiver Mentoring Project used a randomized design, but reported analyses of pre-post differences within groups.

Smart Support presented study results in an infographic provided by the developer rather than a research report.

Although many of the models have begun the process of building a research base, additional research on out-of-home ECE models for infants and toddlers is essential for moving the field...
forward. The compelling models that are well-specified and have some existing research evidence might be ready for impact studies that examine their effects on children’s outcomes. The two models that are currently the focus of impact studies could be tested with different subgroups of caregivers (for example, family child care providers and center-based providers) or children (for example, dual language learners and monolingual English speakers) to identify the groups for which particular strategies are most effective. Others might require a full spectrum of research, including implementation studies, outcome studies, and rapid cycle evaluations, to test the feasibility of staff training and implementation procedures, develop standards for high-fidelity implementation and measures to monitor fidelity, and assess whether the models show potential for producing intended outcomes. In addition, research is needed on the components of the models that are most important to achieving desired child outcomes. Such a process of model development and initial testing could lay the groundwork for rigorous evaluation to identify effective models and model components that have strong potential to improve outcomes for infants and toddlers and prepare them for further learning as they transition into preschool.

Since the process of developing and testing models requires time and resources, several innovative strategies should be considered for supporting model development. Recent attention has been given to the use of rapid cycle evaluations as a cost-effective strategy for guiding decision making (Cody and Asher 2014; Metz et al. 2015). By leveraging data available in administrative records, model developers can test interventions more quickly than evaluations that require collecting data. Because the outcomes need to be observable in a short period of time, it is most useful in looking at outputs and impacts on intermediate outcomes. Rapid cycle evaluations can be particularly useful in testing potential solutions to implementation difficulties. For example, this type of evaluation could be used to test interventions for increasing ongoing attendance rates of informal caregivers participating in ELR (such as altering the time of day events are offered, offering transportation, or using text message reminders); ELR administrative data could serve as a data source for tracking whether the interventions led to increased attendance. In this way, it is a powerful tool for informing decision makers about ways to continually improve program models.

Model developers and other decision-makers may also be able to collaborate with networks of researchers to implement these types of evaluations. For example, the Network for Infant/Toddler Researchers (NITR) sponsored by OPRE, collaborative innovation and improvement networks (CoINs), and Early Learning Labs could serve as forums for supporting development of ECE models for infants and toddlers. These networks bring together practitioners, researchers, and experts for mutual learning. Early Learning Labs aim to accelerate experimentation and development of scalable early learning interventions.
Key Findings

- LITES defined “compelling models” as models that are viewed by the ECE field as having potential to promote infant and toddler early learning in out-of-home settings, but have not yet been rigorously evaluated. LITES prioritized models that met at least two of the following four criteria:
  1. At least one descriptive study of child outcomes with potentially positive findings (2 models met this criteria)
  2. At least one impact study with positive findings on interim outcomes (3 models met this criteria)
  3. Documentation to support replication (all 13 models met this criteria)
  4. Used in at least two independent sites or, for curricula, in at least five percent of Early Head Start programs (all 13 models met this criteria)

- LITES examined infant and toddler early learning models that targeted children’s cognitive, language, or social-emotional/behavioral development. LITES identified compelling models through a nomination process and discussion with a small group of experts in the field. Together with the systematic review, the two components provide an extensive picture of available models to support infant and toddler early learning, including those with rigorous evidence of effectiveness on child outcomes and those considered compelling in the field but lacking rigorous research evidence. LITES, however, does not provide an exhaustive review of all available infant and toddler early learning models nor the full range of descriptive research conducted on them.

- LITES identified 13 compelling models to support infant and toddler early learning in out-of-home ECE settings that have potential for the field but not yet rigorously evaluated.
  - 2 models provide direct early learning services to infants and toddlers.
  - 6 models provide coaching, modeling, or consultation to help caregivers support infant and toddler early learning.
  - 5 models are infant/toddler curricula.

- The outcomes targeted by the compelling models include children’s development (9 models), caregiver knowledge and skills (3 models), and environment quality (3 models).
  - Of the nine models targeting children’s development, seven (including all five curriculum models) target multiple domains of development including language, cognition, and social emotional/behavioral development and two (both mental health consultation models) target only children’s social emotional/behavioral development.
  - Although only three models specifically target caregivers’ knowledge and skills, all 13 models include supports for caregivers (such as offering training, coaching, or consultation to caregivers, or implementation guides and other materials).

- The level of specification of the compelling models varied. All models could benefit from additional guidance on how to implement with fidelity. Staff in many infant and toddler ECE settings may be using models with limited training or support, potentially resulting in wide variation in implementation.

- Eight of the 13 models had at least some research, usually a single implementation or descriptive study. Two models had descriptive studies measuring child outcomes and four had descriptive studies measuring interim outcomes. Three models had impact studies examining interim outcomes, and impact studies examining child outcomes were under way for two models. None of the curricula models had existing research.
  - Across the five descriptive and three impact studies of interim outcomes, the outcome domains measured included observed quality (seven studies) and caregiver knowledge and skills (four studies).
  - Across the two descriptive studies of child outcomes both measured social-emotional/behavioral development and one also measured school readiness and vocabulary.
  - The three models with impact studies of interim outcomes were all professional development models; the findings pointed to the potential of these models to improve observed quality and increase caregiver knowledge and skills.

- A full spectrum of implementation and outcome research is needed to develop well-specified ECE models, test the feasibility of implementation, develop fidelity standards and measures, and assess whether the models show potential for improving infant/toddler early learning outcomes. This research would lay the groundwork for rigorous evaluation to test model effectiveness.
I. INTRODUCTION

A growing body of research indicates that high quality early learning experiences can promote young children’s development and help to reduce achievement gaps (Camilli et al. 2010; Duncan and Magnuson 2013). Recent research bringing together neuroscience, child development, and economic perspectives has made the case that children’s prenatal and early experiences are deeply influenced by poverty, with impacts on cognitive, social-emotional, and physical health outcomes that extend into the school years and beyond (Camilli et al. 2010; National Scientific Council on the Developing Child 2007; Halle et al. 2009; Yoshikawa et al. 2013). These findings have emphasized the need for high quality early learning experiences for disadvantaged children that can promote young children’s development and reduce achievement gaps. Research is building about the effectiveness of preschool programs for preparing children for entry into kindergarten and beyond, yet less is known about effective program models to support infant and toddler early learning. Therefore, to help inform research, policy, and program directions at the federal, state, and local levels, the Office of the Assistant Secretary for Planning and Evaluation (ASPE), in partnership with the Office of Planning, Research and Evaluation (OPRE), within the U.S. Department of Health and Human Services, funded Mathematica Policy Research and its partners to conduct the Learning about Infant and Toddler Early Education Services (LITES) project.

The project includes a systematic review to identify effective out-of-home early care and education (ECE) models for infants and toddlers (Monahan et al. 2015). The systematic review is designed to identify models for infants and toddlers with the strongest evidence of effectiveness in improving children’s outcomes in the domains of cognitive, language, and social emotional/behavioral development. The LITES project also includes a scan of the field for infant-toddler ECE models that are of interest (or “compelling”) for supporting infant/toddler development in these domains, but currently lack rigorous research examining impacts on children’s developmental outcomes. For both components, we examined infant and toddler early learning models that targeted children’s cognitive, language, and/or social-emotional/behavioral development. For the systematic review, we conducted a comprehensive literature review to identify studies with eligible research designs, rated the quality of the studies, and examined evidence of effectiveness on children’s outcomes. In contrast, for the compelling models scan, we identified models through a nomination process and discussion with experts in the field. This report focuses on the compelling models scan.

Together, the two components provide a picture of available models to support infant and toddler early learning, including those with rigorous evidence of effectiveness on child outcomes and those considered compelling in the field but lacking rigorous research evidence. This later component is a unique contribution of LITES since most systematic reviews do not include a category of models without rigorous research on the identified outcomes of interest. LITES, however, does not provide an all-inclusive review of all available infant and toddler early

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Footnote: We developed the compelling models nomination process to identify models considered compelling by ECE experts. Because it was a nomination process, this report does not provide a representative or exhaustive list of all possible replicable program models that support infant and toddler early learning in out-of-home ECE settings and lack rigorous research.
learning models nor the full range of descriptive research conducted on them. An exhaustive scan for all potential programs was beyond the scope of this report. For example, we did not consider models with only studies rated as low quality in the systematic review for the compelling models scan. The models with only low-rated studies are described in Appendixes A and B of Monahan et al. 2015.

Recognizing that some ECE models for infants and toddlers have only preliminary evidence, this report focuses on what can be learned from these compelling models that are of interest to the field. The purpose of this scan for compelling program models is to identify and highlight models that warrant further consideration by researchers, policymakers, and practitioners due to their potential for contribution to the field. These include models with studies that do not have sufficiently rigorous designs, such as descriptive outcome studies; models for which rigorous evaluations are under way but not yet completed; models with high quality implementation studies but no impact evaluations; and other models that lack rigorous evidence but are compelling to the field and warrant further study. In this report, we describe these compelling models, examine and summarize the evidence supporting each of them, and identify associated research gaps. The report provides an overview of newly developed and existing models in the field that may be ready for more rigorous evaluation. An understanding of these models and gaps in the research can move the field toward more rigorous, high quality research designs to better assess the effectiveness of program models designed to support infant and toddler early learning.

For this project, we defined compelling models as models that are viewed by the ECE field as having potential for promoting infant and toddler early learning in the domains of cognitive, language, or social-emotional/behavioral development, but have not yet been rigorously evaluated to examine impacts on these outcomes. To ensure potential replication in new settings, we focused the project on well-specified models that included a defined package of components of infant and toddler early learning services or professional development to help caregivers support infant and toddler early learning. We defined well-specified models as those that had: (1) clear inclusion and exclusion criteria that define the population for which the model is intended, (2) a clear description of the model components or features that must be present, and (3) clear practice guidance to promote consistency of service delivery (such as the availability of implementation guides and staff training materials, requirements for staff qualifications, or the availability of ongoing technical assistance; Fixsen et al. 2013).

This report profiles 13 compelling infant and toddler ECE models that were identified through the LITES search methodology (see section B below), summarizes available research on these models, and suggests additional research needed to inform model development and support replication, and ultimately to demonstrate evidence of effectiveness (see Box I.1). Many of these models have been replicated but have not yet been rigorously evaluated. A few of the models have descriptive studies examining children’s outcomes or rigorous evaluations examining

---

11 Out-of-home early learning services for infants and toddlers often draw on a series of theoretical approaches, such as Reggio Emilia and Montessori, and practices, such as continuity of care and primary caregiving. These approaches and practices are implemented in a range of configurations and intensities across settings, thus making them difficult to replicate consistently without further specification. Therefore, LITES does not feature these approaches and practices in this report, even though they are prevalent in the field.
interim outcomes, but all lacked publically available rigorous evaluations examining effects on children’s outcomes. Two are models that provide direct early learning services to infants and toddlers. Six models focus primarily on working with caregivers through coaching, modeling, and/or collaborative consultation to help them support children’s early learning, and an additional five models are curricula implemented in programs for infants and toddlers. Although the models broadly fall into the three categories described, in practice, there is overlap across the categories. For example, most of the direct early learning models and curriculum models we profiled include staff training, and some include ongoing support in the form of coaching or other consultation. In addition, two of the models focused on working with caregivers include a curriculum model that participants implemented in their ECE settings.

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12 Interim outcomes are those other than child outcomes that are thought to be related to child development. For LITES, this included the following domains: global ECE quality, structural features of care, caregiver-child interaction, and caregiver knowledge of child development.

13 To be eligible for the systematic review, the models had to have eligible research designs examining the impact of the models on child outcomes in the domains of language, cognition, and/or social emotional/behavioral development.

14 The models profiled employ varying approaches to ongoing support, including coaching, mentoring, and consultation beyond a one-time training. Coaching is a relationship-based process led by an expert with specialized skills and knowledge, who often serves in a different professional role than the recipient(s) (National Association for the Education of Young Children and National Association of Child Care Resource and Referral Agencies 2011). Mentoring involves guidance from a more experienced teacher to a less-experienced mentee to increase professional capacity and effectiveness. Consultation is a collaborative problem-solving process typically focused on addressing a specific issue or topic. Mentoring and coaching are often used interchangeably to describe individualized professional development interventions that involve establishing a relationship between a mentor or coach and learners, conducting observation and assessment, demonstration and practice, and on-the-job guidance (Head Start Bureau, 2001; Hanft et al., 2005). Throughout this report, we use the model developers’ own language when referring to these models.

15 For purposes of this project, we used the definition of curriculum Epstein et al. (1996) used in their review of models of early childhood education. They defined a curriculum as a set of education practices that are recommended from a specific theoretical viewpoint. Further, we focused on models that included documentation to support implementation of the practices.
### Box I.1. Compelling models prioritized for inclusion in the report

<table>
<thead>
<tr>
<th>Models that provide direct early learning services to children:</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Early Learning Readiness Program for Informal Family, Friend, and Neighbor Caregivers</td>
</tr>
<tr>
<td>• Educare</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Models that primarily focus on professional development with caregivers:</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Early Childhood Consultation Partnership</td>
</tr>
<tr>
<td>• Expanding Quality in Infant Toddler Care (EQIT) course and EQ RELATE Model of Coaching</td>
</tr>
<tr>
<td>• First Beginnings (Philadelphia Inclusion Network)</td>
</tr>
<tr>
<td>• Infant Caregiver Mentoring Project</td>
</tr>
<tr>
<td>• Seeds to Success</td>
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<tr>
<td>• Smart Support</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Curricula models:</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Assessment, Evaluation, and Programming System, Second Edition, Curriculum for Birth to Three Years</td>
</tr>
<tr>
<td>• The Creative Curriculum for Family Child Care, Second Edition</td>
</tr>
<tr>
<td>• The Creative Curriculum for Infants, Toddlers &amp; Twos, Third Edition</td>
</tr>
<tr>
<td>• Hawaii Early Learning Profile 0-3</td>
</tr>
<tr>
<td>• HighScope Infant-Toddler Curriculum</td>
</tr>
</tbody>
</table>

Across the 13 models, the range of target outcomes include children’s development (9 models), caregiver knowledge and skills (3 models), and environment quality (3 models; Appendix B, Table B.1). Of the nine models targeting children’s development, seven (including all five curriculum models) target multiple domains of development, including language, cognition, and social emotional/behavioral development and two (both mental health consultation models) target only children’s social emotional/behavioral development. Although only three models specifically target caregivers’ knowledge and skills, all 13 models include supports for caregivers (such as offering training, coaching, or consultation for caregivers, or implementation guides and other materials) to help them support children’s development and/or improve program quality.

Within categories of models we identified common features. Specifically, the models primarily focused on professional development for caregivers were most often relationship-based, one-on-one interventions that were offered to caregivers in ECE settings and were focused on achieving specific and articulated objectives. Most of the models were intensive with services offered weekly or biweekly and substantial in duration lasting from four to six months. According to the research literature, these features may represent effective practices in professional development (U.S. Department of Education 2010). All five curricula models are linked to child assessment tools; the assessments are designed to guide caregivers in how they individualize services for children. These models also include preschool versions (some of which have been rigorously evaluated) allowing for continuity of approaches from birth to age 5 years.

In the remainder of this chapter, we describe the criteria we used to identify and select compelling models. Chapter II includes detailed profiles of the 13 models that we identified, including information about model implementation and existing research. In Chapter III, we describe the research gaps and recommend directions for future research to fill these gaps and build the knowledge base.
A. Defining out-of-home infant and toddler ECE services

We focused this scan of the field on models designed to improve children’s outcomes either directly by providing out-of-home early learning services to children, or indirectly by working with children’s out-of-home caregivers to help them support early learning. We considered models that focused on multiple domains of children’s development, such as cognitive, language, or social-emotional/behavioral domains, as well as targeted interventions that could be layered on top of another model and focused on improving children’s outcomes in a single domain or improving caregiver practice in a single area.

As discussed earlier, we focused on well-specified models. We set this requirement because the translation from science to practice is a critical step for practitioners to implement models consistently and in adherence with a developer’s intent (Wandersman et al. 2008). In addition to translating science into practice, support systems (such as pre-service and in-service training) are needed to help practitioners replicate models as intended (Wandersman et al. 2008). Well-specified, replicable models can be rigorously evaluated, and if found to be effective, can be adopted by other ECE service providers to support children’s healthy development. Defining a model so that it can be replicated by others requires a degree of model specification, as well as the development and use of measures to assess whether it was implemented with fidelity, in adherence with model specifications (Dane and Schneider 1998; O’Donnell 2008).

To be considered eligible for LITES, models also had to meet the following inclusion criteria:

- The target population for the model had to include infants and toddlers, defined as children from birth to age 36 months. Models could include other age groups as well; for example, they could target children from birth to age 5.
- Models had to be targeted broadly to infants and toddlers and/or their adult out-of-home caregivers. Models targeted narrowly to infants and toddlers with diagnosed disabilities or specific medical conditions were not included in the review. However, models targeted

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16 Program models that provide infrequent or supplemental home visits were considered for inclusion in the review, but only if the primary service setting was out-of-home care. Program models that provide supplemental services in areas such as nutrition, health and developmental screening, supports for parents, and referrals to other community resources were considered for inclusion in the review, but only if the primary focus was on services delivered outside the child’s home to support infant and toddler early learning. Program models that provide professional development to adult out-of-home caregivers were considered for inclusion in the review as long as the professional development involved intervening directly with caregivers, took place in the caregiving setting or a similar setting, and focused on helping caregivers support infant and toddler early learning. Other indirect services—such as parenting, family self-sufficiency, or referral services—were not included, because they do not target children’s early learning in out-of-home care settings.

17 Programs that enroll families before the child’s birth were considered in the review, as long as the primary focus of the model was supporting children’s early learning in out-of-home ECE settings.

18 The federal government makes specific investments in special education and to support the development of children with disabilities. The focus of this review is to identify effective program models for supporting early learning among a broad range of infants and toddlers.
toward broad groups of at-risk infants and toddlers (for example, children from low-income families or low-birth weight children) were eligible for inclusion.

- The majority of services had to be provided outside of the child’s own home. Models could be implemented in center-based settings, such as ECE classrooms or child care centers, or in home-based settings such as family child care homes or informal caregivers’ homes.

The primary distinction between the models included in this report and those included in the LITES systematic review is the availability of eligible research examining the impact of the models on child outcomes in the domains of language, cognition, and/or social emotional/behavioral development. For compelling models, we were interested in models that showed potential for promoting the early learning of infants and toddlers, but lack studies with eligible designs examining impacts on children’s outcomes from which causality can be inferred.\(^{19}\) The systematic review, in contrast, included only models that had at least one impact study examining children’s outcomes. More information about the specific eligibility criteria for the systematic review can be found in the systematic review report (Monahan et al. 2015).

**B. Identifying and selecting the 13 compelling models**

In consultation with ASPE and an expert work group, Mathematica developed a process for identifying and selecting models for inclusion. The process involved two steps: (1) identifying compelling models through a call for nominations and outreach to experts, and (2) selecting models to profile by applying prioritization criteria.

1. **To identify models, we relied on input from the field solicited through a call for nominations and outreach to experts**

   We relied on two primary strategies for identifying compelling models. First, we disseminated a call for nominations to a selected group of electronic mailing lists for practitioners and researchers in ECE and related fields (Appendix Table A.1). The call for nominations described the purpose of the project and the types of models of interest, and provided instructions for submitting a nomination. We disseminated the call for nominations on May 30, 2014. It was open for eight weeks, with an end date of July 25, 2014.

   We also solicited nominations from a range of experts in ECE and related fields. The primary role of the expert work group was advising us on our approach to identifying and selecting compelling models (Table I.1). We also asked them for suggestions of models we should consider. We worked with ASPE and the expert work group to identify other practice and research experts to contact. We ultimately conducted brief, informal telephone discussions with three additional experts to ask for their input (see Table I.1). Finally, our federal project officers solicited recommendations from colleagues within ASPE and ACF.

   Multiple experts recommended that we include curriculum models used in infant and toddler ECE. To identify curricula commonly used by infant/toddler caregivers, we examined two

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\(^{19}\) Consistent with the LITES systematic review, we defined impact studies as those with an RCT, matched comparison group design, regression discontinuity design, or single-case design.
I. INTRODUCTION

MATHEMATICA POLICY RESEARCH

7

sources. First, we reviewed findings from the Early Head Start Family and Child Experiences Survey (known as Baby FACES), a descriptive study of a representative sample of Early Head Start programs and the children and families they serve. Second, we reviewed data from the Head Start Program Information Report, which contains self-reported administrative data from all Early Head Start programs nationally. Across both sources, we identified relevant curricula used by at least 5 percent of Early Head Start programs.

Finally, we reviewed models that were screened out of the LITES systematic review because they lacked impact studies examining children’s outcomes. Together, these processes yielded a total of 64 nominated models (Appendix Table A.2 lists each model and the nomination source).

Table I.1. LITES compelling models expert work group members

<table>
<thead>
<tr>
<th>Expert work group members</th>
<th>Affiliation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clancy Blair</td>
<td>New York University</td>
</tr>
<tr>
<td>James Elicker</td>
<td>Purdue University</td>
</tr>
<tr>
<td>Diane Horm</td>
<td>University of Oklahoma-Tulsa</td>
</tr>
<tr>
<td>Julia Isaacs</td>
<td>Urban Institute</td>
</tr>
<tr>
<td>Brenda Jones Harden</td>
<td>University of Maryland</td>
</tr>
<tr>
<td>Pamela Morris</td>
<td>New York University</td>
</tr>
<tr>
<td>Kathy Thornburg</td>
<td>University of Missouri</td>
</tr>
</tbody>
</table>

Practice and research experts

| Jennifer Boss                   | Early Head Start National Resource Center, ZERO TO THREE |
| Rachel Chazan Cohen             | University of Massachusetts, Boston   |
| Sandra Petersen                 | Early Head Start National Resource Center, ZERO TO THREE |

Next, we reviewed information on each model identified to determine whether it fit within the scope of the LITES project. Using the inclusion criteria described above as our guide (age of target population; broadly targeted all infants/toddlers or non-parental caregivers of infants/toddlers; most services provided outside of the child’s own home), we screened out 43 of the 64 models. See Appendix Table A.2 for more detailed information about the reasons models were screened out. Models were screened out for a variety of reasons, primarily because they were implemented in the child’s home or targeted parents rather than out-of-home caregivers. In the case of curricula, if they did not meet the prevalence requirement (used in at least 5 percent of Early Head Start programs as determined by examining data from the Head Start Program Information Report and Baby FACES), they were also screened out.

2. We prioritized models for review that had suggestive favorable evidence and strong potential for replication

We applied four criteria to prioritize which of the remaining 21 models to profile. These criteria address different ways in which a model could be considered compelling. The first two criteria highlight models with suggestive favorable evidence on child outcomes or interim outcomes. The second two criteria emphasize models that have strong potential for replication. The four criteria are:

1. Descriptive Research: The model had at least one descriptive study (meaning a study without a comparison group) that measured children’s outcomes. Of particular interest were
studies that showed potentially positive findings in at least one of the following child outcome domains: cognitive, language, or social-emotional/behavioral development.

2. **Interim Outcomes:** The model had at least one study measuring impacts on interim outcomes thought to be closely related to children’s early learning in out-of-home ECE settings, including the following:
   - Structural features of out-of-home ECE settings, including child-to-staff ratios; group size; caregiver qualifications; professional development; the physical environment and furnishings; schedules/routines; and health, safety, and nutrition practices
   - Caregiver–child interaction in out-of-home ECE settings, including sensitivity/responsiveness, learning and language supports/instruction, positive regard/warmth, behavior guidance, support for peer interaction, and areas of concern in interactions
   - Out-of-home caregiver skills or knowledge of infant-toddler caregiving practices
   - Global ECE quality

3. **Well-Specified:** The model was well-specified and had documentation available to support replication; documentation could come from at least one study of any design or model materials, such as implementation or training guides or a model’s website.

4. **Prevalent:** The model was prevalent in the field. For curricula, we set a threshold of reported use in at least 5 percent of Early Head Start programs (see above). For other models, we set a minimal threshold of use in at least two independent sites.

   The LITES team ranked models based on the number of criteria they met. In consultation with ASPE, ACF, and an expert work group of researchers, we determined that models that met two or more of these criteria would be most compelling to the field and should be highlighted in this report. This process resulted in a final list of 13 models. Table I.2 lists all 21 models and shows which of the four criteria each met, and also indicates the 13 that met more than one criterion and were therefore profiled in this report. The 13 selected models that met more than one criterion are also described in detail in Chapter II.

---

20 As described earlier in this chapter, we defined well-specified models as those that had: (1) clear inclusion and exclusion criteria that define the population for which the program is intended, (2) a clear description of the program components or features that must be present, and (3) clear practice guidance to promote consistency of service delivery (such as the availability of implementation guides and staff training materials, requirements for staff qualifications, or the availability of ongoing technical assistance; Fixsen et al. 2013).
### Table I.2. Screened in models and prioritization criteria

<table>
<thead>
<tr>
<th>Model</th>
<th>Descriptive study measuring children’s outcomes</th>
<th>Study measuring impacts on interim outcomes</th>
<th>Well-specified with documentation to support replication</th>
<th>Prevalent</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Models that met more than one criterion and were selected for inclusion</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Educare</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>2. Early Learning Readiness (ELR) Program for Informal Family, Friend and Neighbor Caregivers</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Professional development models</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Early Childhood Consultation Partnership</td>
<td></td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>4. Expanding Quality in Infant Toddler Care (EQIT) course and EQ RELATE Model of Coaching</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>5. First Beginnings (Philadelphia Inclusion Network)</td>
<td></td>
<td>✓</td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>6. Infant Caregiver Mentoring Project</td>
<td></td>
<td>✓</td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>7. Seeds to Success</td>
<td></td>
<td>✓</td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>8. Smart Support</td>
<td></td>
<td>✓</td>
<td></td>
<td>✓</td>
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<tr>
<td><strong>Curricula models</strong></td>
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<tr>
<td>10. The Creative Curriculum for Family Child Care</td>
<td></td>
<td>✓</td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>11. The Creative Curriculum for Infants, Toddlers &amp; Twos</td>
<td></td>
<td>✓</td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>12. Hawaii Early Learning Profile 0-3</td>
<td></td>
<td>✓</td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>13. HighScope Infant-Toddler Curriculum</td>
<td></td>
<td>✓</td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td><strong>Models that met one or no criteria and were excluded</strong></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>14. Ball State University Child Study Center</td>
<td></td>
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<tr>
<td>15. Comprehensive Child Development, Inc.</td>
<td></td>
<td></td>
<td></td>
<td>✓</td>
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<tr>
<td>16. Cuyahoga County Early Childhood Initiative</td>
<td></td>
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<td>✓</td>
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<tr>
<td>17. Emotional Beginnings</td>
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<tr>
<td>18. Piper Center for Family Studies and Child Development at Baylor University</td>
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<td></td>
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<tr>
<td>19. Promethean Foundation (Pro-Kids)</td>
<td></td>
<td></td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>20. Responsive Infant/Toddler Practice within a Suite of Inquiry</td>
<td></td>
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<td></td>
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<tr>
<td>21. San Diego State University Children’s Center</td>
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</tbody>
</table>
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II. COMPELLING MODELS: COMPONENTS AND EXISTING RESEARCH

In this chapter, we present profiles of the 13 models we identified as compelling to the field and prioritized for inclusion in this report. Each profile includes as much information as possible about model implementation, including an overview of the model and its core components, the target population, targeted outcomes, dosage and program length, requirements for staff, and the types of supports available for replication. The profiles also discuss existing and ongoing research, if any was identified. Appendix B lists the model components and implementation guidelines across all 13 models.

To gather information about the models for the profiles, we conducted a literature search and reviewed publically available materials. We conducted a targeted literature search on the names of selected models to identify any existing research. Relevant research included causal studies that measured only interim outcomes, descriptive studies that measured children’s outcomes, and implementation studies. Appendix C describes the literature search methods and results. We also conducted Internet searches to identify publically available information about model implementation, such as websites, implementation guides, and training materials. To ensure the accuracy of the information about implementation, we sent the profiles to the model developers for review and inquired about any research that was conducted on the models or as part of model development.

We begin by presenting the two models that provide direct early learning services to children:

1. Early Learning Readiness Program for Informal Family, Friend, and Neighbor Caregivers
2. Educare

We then present profiles for the six models that primarily focus on professional development for caregivers:

1. Early Childhood Consultation Partnership
2. Expanding Quality in Infant Toddler Care course and EQ RELATE Model of Coaching
3. First Beginnings (Philadelphia Inclusion Network)
4. Infant Caregiver Mentoring Project
5. Seeds to Success
6. Smart Support

21 We specifically asked developers for information that we were missing about models (for example, dosage and program length). In the model profiles, we note if the developers did not clarify information that was missing when they responded to our inquiries.
Finally, we profile the five curricula models:

2. The Creative Curriculum for Family Child Care, Second Edition
3. The Creative Curriculum for Infants, Toddlers & Twos, Third Edition
4. Hawaii Early Learning Profile 0-3
5. HighScope Infant-Toddler Curriculum
DIRECT EARLY LEARNING SERVICES MODELS
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EARLY LEARNING READINESS (ELR) PROGRAM FOR INFORMAL FAMILY, FRIEND, AND NEIGHBOR CAREGIVERS

A. Overview

1. Overview, model components, and content

The Early Learning Readiness (ELR) Program for Informal Family, Friend, and Neighbor Caregivers is designed to promote the healthy development and school readiness of children, both directly and by increasing the skills and knowledge of their caregivers. It is targeted to children receiving care in informal child care settings, and their informal caregivers. These children and their caregivers participate together in the program through sessions that are facilitated and held in a group setting. Sessions are held at a community location selected for its accessibility, such as a church, community center, public housing or apartment building, YMCA, or library. A typical session consists of the following: (1) an opening circle time where the children and caregivers read stories and sing songs together; (2) time to explore a range of activities at 13 interest centers; and (3) a closing circle to review the day’s learning. During the sessions, facilitators talk with caregivers about the interest centers, how the activities encourage learning in children, and the role caregivers can play in promoting learning and development using the activities. In addition, activities at each center include written guidance for caregivers that list learning concepts, vocabulary words, and questions caregivers can ask the children. Session content features monthly, culturally sensitive themes and is designed to align with local standards for school readiness. Volunteers assist sites with several aspects of running the program, including recruiting participants, setting up the sessions, and translating for participating caregivers whose primary language is not English. The program also collaborates with local community partners to provide additional resources and supports. The ELR program is run by the YMCA of the USA (Y-USA) and is based on the Tutu and Me program model that was developed by the Partners in Development Foundation to work with informal caregivers (primarily grandparents) in Hawaii (Partners in Development Foundation 2014).

2. Target population, including available languages

- The ELR program serves children from birth to age 5 who receive informal care from family members, friends, and neighbors, as well as their informal caregivers. The program targets low-income families and populations, although it is not clear whether income requirements are used to determine eligibility.

- The program serves children whose families speak one or more of a variety of languages at home. The majority of ELR participants speak Spanish, but in some communities other languages are also represented, including Russian, Chinese, Somali, Arabic, Vietnamese, Japanese, and Hindi. Volunteers and fellow caregivers help translate when caregivers experience language barriers related to program participation.

3. Targeted outcomes

- The ELR program is designed to promote the healthy development and school readiness of children, both directly and by increasing the skills and knowledge of their caregivers.
4. **Dosage and program length**
   - The program is offered twice per week and each session is two hours. In most sites, the program is offered for 38 to 42 weeks during the school year.

5. **Staff requirements, including staff type, education, and experience**
   - In each site, the program is led by a local ELR supervisor and is implemented by one or more facilitators.
   - Y-USA recommends that local ELR supervisors and facilitators have a background in early childhood, education, or social work. Specific skills vary by site, with hiring decisions made at the local level.

6. **Supports for implementation**
   - The program has a training plan for newly hired local staff that includes in-person training sessions, online modules on broader topics such as development and achievement gaps, and webinars on specific program components. These materials are posted to an online community that all ELR staff can access.
   - Y-USA technical advisors are available to coach, monitor, and support local staff.
   - National program staff (from Y-USA) conduct site visits to local programs to assess program fidelity and quality, especially for new sites and groups. Local staff also monitor and report on key fidelity and quality indicators to national program staff each month during the program year. Fidelity standards address the materials/environment, circle time, interest centers, and administration. Quality measures assess the quality of interactions, engagement, and content covered during sessions. Training for new staff covers fidelity measures and evaluation; this information is also available for local sites on the online community maintained by Y-USA for local ELR staff.
   - Y-USA is piloting a mentoring program that partners local YMCA leaders who have successfully implemented the program with staff at sites that are new or have struggled with the program.

7. **Overview of the locations where the model has been or is currently implemented, including types of implementing agencies**
   - The program operates at local YMCA sites in 26 states across the country. Sites are located in neighborhoods with low educational achievement, high concentrations of poverty, or a large population of new U.S. residents.

B. **Summary of existing research**

   Y-USA conducts an annual internal evaluation of the ELR program, using data collected from local ELR sites. The evaluation assesses program implementation and participant outcomes and is used to inform program improvement efforts. Table 1 provides an overview of the 2013–2014 ELR program evaluation (Y-USA 2014). Below we discuss the findings from the 2013–2014 study.

   - Each month, local ELR supervisors reported whether their site met a series of program-developed fidelity indicators and quality measures. Fidelity items determine the extent to
which the local site’s program aligns with the original Tutu and Me model for materials/environment, circle time, the 13 interest centers, and program administration. The quality items rate the program content, the engagement of participating children and caregivers, and the interactions between children, caregivers, and facilitators. The median percentage of fidelity indicators met each month ranged from 86 to 95 percent, and the median percentage of quality measures met each month ranged from 94 to 100 percent. Site visits from national program staff in the fall and spring of the program year found that sites met a median of 86 percent of the same fidelity indicators and 94 percent of the same quality indicators in both the fall and spring.

- Attendance data showed that 15 percent of caregivers attended more than 40 sessions (the median number of sessions offered was 72), whereas 48 percent attended fewer than 10 sessions.

- Caregivers were surveyed during the program year and at the end of the year. Although only 23 percent of participating caregivers responded to the end-of-year survey, most of these respondents reported that the program improved their caregiving knowledge and behaviors, and that they were very satisfied with the program. For example, 90 percent of the 415 caregivers responding to the survey agreed that the program helped them understand more about how to have positive relationships and interactions with young children in their care, and another 9 percent said they somewhat agreed with this statement. Seventy-seven percent of caregivers rated program activities as excellent, with the remaining 23 percent rating them as good.

- Finally, ELR staff reported on outcomes of children ages 3 to 5 in five developmental domains (physical well-being and development, social and emotional development, language and literacy development, cognition and general knowledge, and approaches to learning) at the beginning and end of the year using a program-developed observation form. In addition, caregivers of children ages 3 to 5 were surveyed on how the program had helped the skills and behavior of children in their care. However, we did not review these findings because they applied to preschool-age children only, which made them outside the scope of this report.

C. For more information

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D. References


Table 1. Overview of existing research, ELR

<table>
<thead>
<tr>
<th>Study citation</th>
<th>Study design</th>
<th>Sample size/unit of analysis</th>
<th>Sample characteristics</th>
<th>Measures</th>
<th>Data collection methods</th>
</tr>
</thead>
<tbody>
<tr>
<td>Y-USA 2014</td>
<td>Implementation; pre-post</td>
<td>1,986 children and 1,820 caregivers in 94 groups at 36 local sites attended at least once</td>
<td>Characteristics of caregivers who attended at least three times (range of n = 1,021 to 1,298 with data): Median age 32; 94 percent female; 59 percent Hispanic/Latino, and 10 percent African American/Black; 56 percent language other than English primarily spoken at home; 50 percent high school education or less</td>
<td>Program-developed indicators of fidelity (materials/environment, activities, administration) and quality (program content, participant engagement, participant/facilitator interactions)</td>
<td>Program-reported administrative data from monthly self-reports by local sites and data collected during local site visits conducted by Y-USA staff in fall and spring of the program year</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1,640 children and 1,414 caregivers attended at least three times</td>
<td>Characteristics of children who attended at least three times (range of n = 1,413 to 1,533 with data): Mean age 2.7; 4 percent under age 1, 39 percent age 1-2, and 57 percent age 3-5; 51 percent female, 56 percent Hispanic/Latino, and 11 percent African American/Black; 56 percent language other than English primarily spoken at home</td>
<td>Program attendance</td>
<td>Program-reported administrative data</td>
</tr>
<tr>
<td></td>
<td></td>
<td>415 caregiver end-of-year survey respondents</td>
<td></td>
<td>Caregiver self-report on the role of the program on caregiving knowledge and behavior and, for caregivers of children ages 3 to 5 only, on child skills and behavior; caregiver satisfaction with program</td>
<td>Survey of caregivers</td>
</tr>
</tbody>
</table>
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EDUCARE

A. Overview

1. Overview, model components, and content

The Educare Learning Network is a national network of schools that provide full-day, full-year early care and education to low-income children from birth to age 5. The Educare model contains several core features, which are grouped into four domains: (1) data utilization, (2) high quality teaching practices, (3) embedded professional development, and (4) intensive family engagement.

Under a system of continuity of care, children stay with the same teaching team and cohort of children from program entry until they transition to Educare’s Head Start services at age 3. Children then stay with a second team until they transition out of Educare and into elementary school at age 5. Within each teaching team, every child has a primary caregiver who is assigned no more than four infants and toddlers or nine preschoolers, which is designed to allow caregivers to develop a close rapport with each child and family. Three adults are assigned to each classroom of eight infants and toddlers or 17 preschoolers. Groups of staff from up to four classrooms are supervised by master teachers who provide mentoring, coaching, and support to classroom teachers.

The Educare network does not use any one early childhood curriculum; rather, local Educare sites choose their own curriculum. It must be research-based and focus on pre-literacy, early math, and social-emotional skills, and integrate development of these skills with arts activities. In addition to direct early care and education, Educare schools offer on-site family engagement services, provided by full-time family support supervisors and specialists, to promote parent involvement. These staff also coordinate referrals for parents to other services. The Educare model emphasizes an interdisciplinary approach in which staff from different roles work together to promote child and family well-being, and the use of reflective practice and supervision among staff.

Each Educare school is a public-private partnership and blends private dollars with funding from federal Early Head Start and Head Start, and state and local education and child care funding. Some Educare schools offer prenatal services through Early Head Start. The Ounce of Prevention Fund and Buffett Early Childhood Fund oversee and support the Educare Learning Network of schools.

2. Target population, including available languages

- Educare serves at-risk children from birth to age 5 and their families. Families must meet Head Start income requirements to qualify for enrollment (this means the family’s gross

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22 The Early Head Start model is included in the LITES systematic review (Monahan et al. 2015). Although some Educare programs may receive funding from Early Head Start, Educare is a distinct model of early education services and does not yet have rigorous research examining its impacts on children’s outcomes. Therefore, we profile it as a compelling model in this report.
income must not be more than 100 percent of the federal poverty guidelines). Children with special needs are encouraged to apply.

- In addition to children from monolingual English-speaking homes, many Educare schools serve dual language learners, which mostly includes children from homes where Spanish is the primary language used.

3. **Targeted outcomes**

- Educare aims to prepare low-income children to succeed in school, career, and life. Each local site selects a research-based curriculum focused on the development of skills as they relate specifically to language and literacy, social-emotional development, early math concepts, problem-solving, and motor development.

- Family engagement work aims to strengthen parents’ abilities to support their child’s learning as an educator and nurturer, as a leader and advocate for their child, and to promote family well-being after they leave Educare.

4. **Dosage and program length**

- Educare provides full-day, full-year services. Children attend Educare schools a minimum of six hours per school day; specific operational hours of a school are determined based on the feedback from each school’s community needs assessment and parents’ work and school schedules. Children can participate for up to five years (from 6 weeks old to kindergarten entry).

5. **Staff requirements, including staff type, education, and experience**

- Each classroom has a lead teacher with a minimum of a bachelor’s degree in early childhood education; an assistant teacher with a minimum of an associate degree in early childhood education; and a teacher aide with a high school diploma/GED and a credential in child development or training in infant and toddler development.

- Master teachers have master’s degrees in early childhood education; for birth-to-age-3 classrooms, they have special training in infant and toddler development.

- Family support supervisors have master’s degrees in social work or a related field, and family support specialists have bachelor’s or master’s degrees in social work, health, or a related field.

6. **Supports for implementation**

- Groups interested in starting an Educare school in their community must work with the Ounce of Prevention Fund and Buffett Early Childhood Fund to plan and implement the school.

- The national Educare staff help local partners fully implement the model over time through strategies that include intensive technical assistance, consultation, training, and a professional learning community of leaders at Educare schools.
7. **Overview of the locations where the model has been or is currently implemented, including types of implementing agencies**

- There are 20 Educare schools located in 17 communities across 13 states and the District of Columbia. Within each community, the schools are operated by local partnerships of philanthropic organizations, Head Start and Early Head Start providers, school districts, and other partners.

B. **Summary of existing research**

Since 2005, Educare has partnered with the Frank Porter Graham Child Development Institute at the University of North Carolina at Chapel Hill and local research institutions in Educare communities to conduct an ongoing implementation study of the Educare model. Every Educare school participates in this study, for which a brief was published in 2012 containing findings for the 2007–2008 to 2010–2011 school years (Yazejian and Bryant 2012). The brief included findings on overall infant/toddler classroom quality based on the Infant/Toddler Environment Rating Scale-Revised (ITERS-R; Harms et al. 2003). For preschool classrooms, the corresponding measure was the Early Childhood Environment Rating Scale (Harms et al. 2005), and the Classroom Assessment Scoring System (Pianta et al. 2008) is also used in preschool classrooms to measure the quality of emotional support, instructional support, and classroom organization. The brief’s findings on children’s outcomes include school readiness from the Bracken Basic Concepts Scale (Bracken 1998, 1984); vocabulary based on the Peabody Picture Vocabulary Test (PPVT; Dunn and Dunn 2007); and social and emotional skills using the Devereux Early Childhood Assessment (DECA; LeBuffe and Naglieri 1999). Outcomes for children were measured at the end of their participation in the program (as they were leaving for kindergarten), whether they started in Educare at an earlier or later age.

Table 1 provides an overview of this study, whose main findings are discussed below.

- Across 12 Educare schools studied in 2010–2011, 70 percent of infant and toddler classrooms scored a 5 or above on the ITERS-R scale of 1 to 7, with an average quality rating of 5.3. In comparison, 24 percent of classrooms in the nationally representative Early Childhood Longitudinal Study-Birth Cohort scored a 5 or above on the ITERS-R (Mulligan and Flanagan 2006).

- The average Bracken school readiness score for English-speaking children upon exiting Educare for kindergarten from 2007–2008 to 2010–2011 was 95.8, compared to a national average of 100 for all children (not just at-risk children). The average Bracken score for children from Spanish-speaking homes was 88.5. For both language groups, children who entered Educare earlier had higher average scores at program exit than children who entered later. For example, English- and Spanish-speaking children who entered Educare at age 1 had average Bracken scores of 98.5 and 98.1, respectively, at program exit compared with 93.6 and 87.8 for children who entered at age 4. These differences by age of entry were statistically significant at the 0.001 level.

- The average PPVT scores for English- and Spanish-speaking children upon exiting Educare for kindergarten from 2007–2008 to 2010–2011 was 95 and 82.5, respectively, compared with a national average of 100 for all children. As with school readiness, children had higher average PPVT scores if they enrolled in Educare at younger ages. Of those who entered
Educare at age 1, English- and Spanish-speaking children had average PPVT scores of 98.2 and 95.1, respectively, at program exit, while the scores for children who entered at age 4 were 94 and 81.5 at program exit. These differences by age at entry were also statistically significant at the 0.001 level.

- Educare children entering kindergarten demonstrated social-emotional skills on the DECA that were average or above average. The brief containing implementation study findings did not include more detailed information on the DECA results.

Another study (Du 2014) used a qualitative research design to explore the nature of public-private partnerships in early care and education, using Educare as an example. The study interviewed seven respondents involved with developing a partnership to create an Educare school in California about their perceptions of the use of these partnerships, as well as about teacher quality and supports. Because the study used an exploratory approach and did not directly examine Educare implementation or outcomes, it fell outside the scope of this report.

Finally, an RCT of the Educare model began in 2010 and is currently under way, but is not yet complete. Five Educare schools and 225 children are participating in the study, which randomly assigns children to either attend or not attend an Educare school. The first phase of the study will collect data on children’s outcomes through age 3; a planned second phase would assess outcomes in preschool and first grade. The youngest children in the study will turn 3 in September 2015.

C. For more information

Educare Schools: http://www.educareschools.org/home/contactus.php

D. References


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<thead>
<tr>
<th>Study citation</th>
<th>Study design</th>
<th>Sample size/unit of analysis</th>
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<th>Measures</th>
<th>Data collection methods</th>
</tr>
</thead>
</table>
School readiness: Bracken Basic Concepts Scale  
Vocabulary: PPVT  
Social and emotional skills: DECA | Classroom observations  
Child assessments  
Child assessments  
Child assessments |
CAREGIVER PROFESSIONAL DEVELOPMENT MODELS
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A. Overview

1. Overview, model components, and content

The Early Childhood Consultation Partnership (ECCP) is an early childhood mental health consultation program that operates statewide in Connecticut. The program is designed to build the capacity of caregivers (primarily non-parental caregivers such as center-based educators and family child care providers, but in some cases parental caregivers as well) by offering support, education, and on-site consultation to help them meet the social-emotional needs of children in their care. It is designed to address a continuum of care that includes promotion, prevention, and early intervention.

Services provided by ECCP consultants range in scope and can consist of (1) child-specific services, which help non-parental caregivers and family members meet the needs of a particular child; (2) core classroom services, which help a teacher or caregiver meet the needs of their classroom (and include some child-specific services); or (3) intensive center services, which help center staff build capacity to address the needs of the full center (and may include child-specific and classroom services). These services are primarily provided to child care centers and their caregivers and staff, but family child care providers can also receive child-specific services. Child-specific services also involve some work with family members, both directly through in-home observation and support and indirectly through facilitating the partnership between the child’s non-parental caregivers and family members.

ECCP consultants are embedded in the communities they serve. They act as a mental health resource to a variety of early childhood community groups, conduct mental health consultation groups that meet each month, and provide specific training on social-emotional, behavioral, and mental health topics. The monthly meetings and trainings, as well as brief telephone consultations, are also available to family child care providers or other community providers. Finally, ECCP publishes brief resources (structured as postcards or one-page documents) for use by caregivers.

To guide this work, ECCP developed a set of six competencies that define the knowledge, skills, and attributes consultants need to possess:

1. Demonstrated knowledge of early childhood development, mental health, and early care and education
2. Engagement, relationship building, and collaboration with families and non-parental caregivers
3. Observation, screening, and data collection skills
4. Technical assistance that involves action plan development and strategy implementation
5. Knowledge of community systems, partnerships, and resources
6. Reflective practice
ECCP is funded by the Connecticut Department of Children and Families. Advanced Behavioral Health, Inc., a nonprofit behavioral health and management company, developed the model and oversees program implementation.

2. **Target population, including available languages**
   - ECCP serves children from birth to age 5 and their non-parental caregivers in early care and education settings, which include both center-based care and family child care homes. In some cases, the program also provides services to children’s families, including services within children’s homes. ECCP aims to support children who are at risk of developing a mental health disorder or of being suspended or expelled.
   - All families, non-parental caregivers, and programs of children birth to age 5 are eligible for ECCP services. To be eligible specifically for intensive center services, a center must be located in an urban area and serve more than 150 children.
   - ECCP services are available in English and Spanish. Postcards and one-page resources for caregivers are available in English and Spanish, and some are also available in Chinese.

3. **Targeted outcomes**
   - The ECCP model is designed to build the capacity of non-parental caregivers and families so they can improve outcomes for their children. These outcomes include social, emotional, and mental wellness, preventing at-risk children from developing mental health disorders, and avoiding suspensions or expulsions of at-risk children.

4. **Dosage and program length**
   - The length of consultation services ranges from 6 weeks for child services to 12 to 14 weeks for classroom services to 9 months for center services.
   - All services are conducted on a weekly basis; the length of each visit varies based on the visit type, ranging from 1.5 to 3 hours.

5. **Staff requirements, including staff type, education, and experience**
   - ECCP consultants must have a master’s-level degree in a human services field, such as social work, counseling, or child development, and preferably are licensed mental health providers. They also must have previous experience involving early childhood and mental health, including at least two years of field experience in one of these areas.
   - Consultants are supervised by the ECCP leadership team, who are licensed mental health professionals and have experience with early childhood mental health consultation.

6. **Supports for implementation**
   - ECCP’s infrastructure includes a program manual used to ensure fidelity to the model and uniform service delivery. ECCP also uses a centralized information system for program operations, data collection, and reporting. The data from this system are used to create plans for delivering services, for quality assurance, and to promote fidelity to the model.
   - New consultants go through an orientation and receive an initial series of trainings in early childhood mental health consultation during their first six months. After this initial phase, consultants are provided additional trainings as continuing education and receive regular
supervision from the ECCP leadership team that has clinical, reflective, and administrative components. Training modules are based on the set of six competencies developed by ECCP to guide consultants’ work.

- ECCP is a copyrighted and proprietary model. The ECCP model and license, including the information system, manual, consultant training, and support for implementation, are available through Advanced Behavioral Health, Inc.

7. **Overview of the locations where the model has been or is currently implemented, including types of implementing agencies**

- ECCP is provided statewide in Connecticut by partnering with community-based child behavioral health agencies throughout the state. These agencies employ the ECCP consultants, who provide services in their local communities.

- ECCP is also provided in Nassau County, New York, through NASSAU THRIVES, a program offering support to early care and education settings affected by Hurricane Sandy. Advanced Behavioral Health, Inc. contracts with Docs for Tots, a nonprofit, pediatrician-led organization focused on policy issues involving young children, for the administration of the ECCP component of NASSAU THRIVES.

B. **Summary of existing research**

ECCP’s first year of implementation was the subject of a process evaluation (Fink and Wakai 2003). This evaluation collected program administrative data on fidelity and services delivered, surveyed consultants who provided services and the classroom teachers who received them, and conducted qualitative case studies to describe results from program implementation. Table 1 provides an overview of this study, whose main findings are discussed below.

- ECCP administrative data showed that consultants delivered approximately as many intensive center and core classroom services as planned. Consultants delivered intensive center services to 11 centers, compared with 11 anticipated, and delivered core classroom services to 50 classrooms in those centers, compared with 55 anticipated. Core classroom services were also projected to be delivered to 44 classrooms in additional centers that were not receiving intensive center services, and 43 classrooms actually received these services. Overall, 93 classrooms received classroom-level services, compared to a projection of 99 classrooms. However, only 171 children received child-specific services (either in conjunction with center or classroom services or as stand-alone services), compared to a projected service level of 385 children.

- Most teachers reported on a survey that ECCP activities were very helpful to them. For example, 79 percent reported that making decisions about which children needed individual assessment and intervention was very helpful, with 21 percent reporting it was somewhat helpful. Because surveys were mailed four to six weeks after the program ended, teachers were asked about their sustained use of information from two project activities: their classroom ratings on the Infant/Toddler Environment Rating Scale (Harms et al. 1990), and the goals and steps in their classroom action plan. Eighty percent replied they used the classroom ratings and 87 percent replied they used the action plan goals and steps at least once per week.
Teachers also gave positive responses on the survey in several other areas. For example, in response to questions about children’s behavior, 38 percent of teachers reported great improvement in children about whom they were concerned, and another 43 percent reported modest improvement. Teachers reported similar results for improvements in behavior by their class as a whole. When asked about improvement in the responsiveness of their classroom practice to their children’s social and emotional needs, 41 to 57 percent of teachers reported a great improvement depending on the area mentioned (such as supporting interactions or promoting staff resilience). Finally, 88 percent of teachers said they believed the program would reduce the chance that children exhibiting difficult behaviors would be terminated or suspended in the future.

ECCP has also undergone three evaluations led by Dr. Walter Gilliam (Yale University) that used RCT designs; however, two of these (Gilliam 2007 and Gilliam 2014) involved children ages 3 and 4, so they are out of the scope of this report. The third pilot evaluation (Gilliam 2014) involved a small number of two-year-olds (15 treatment and 17 control) in infant/toddler settings (birth to age 2) and examined children’s outcomes. Because the results of this small pilot evaluation were not publically available until December 2014, this model was not included in the LITES systematic review. The pilot study found suggestive evidence of decreased hyperactivity for toddlers; the small sample size may have impeded the authors’ ability to detect a statistically significant impact. The study also found that ECCP resulted in greater levels of home-school collaboration and family involvement for toddlers receiving child-specific services. The study did not find statistically significant impacts on classroom quality or teacher-child interactions, as measured by the Classroom Assessment Scoring System (CLASS; Pianta et al. 2008).

C. For more information

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Gilliam, W.S. “Early Childhood Consultation Partnership: Results Across Three Statewide Random-Controlled Evaluations.” New Haven, CT: Yale School of Medicine, Child Study Center, 2014.


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<tr>
<th>Study citation</th>
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<th>Data collection methods</th>
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<tr>
<td>Fink and Wakai 2003</td>
<td>Process/implementation</td>
<td>11 consultants (8 respondents)</td>
<td>Children receiving specific services: “vast majority” previously engaged in physically aggressive behaviors; 28 percent previously referred for special education or other specialized services; 4 percent for whom behavior led to end of most recent child care arrangement</td>
<td>Services planned and provided</td>
<td>Program administrative data</td>
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<td>89 lead teachers of classrooms receiving services (39 respondents)</td>
<td></td>
<td>Self-reports involving classroom environment and practices, child behavior, sustainability of program activities, referrals to mental health services, and child terminations and suspensions</td>
<td>Surveys of consultants and teachers</td>
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<tr>
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<td></td>
<td>11 sites, 93 classrooms, and 171 children receiving services (either linked with other levels of services or stand-alone)</td>
<td></td>
<td>Qualitative description of implementation</td>
<td>Case studies (featuring interviews and observations of program activities by research team)</td>
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A. Overview

1. Overview, model components, and content

As part of a broader Colorado initiative on expanding the quality and availability of care for infants and toddlers (known as the Expanding Quality in Infant Toddler Care [EQ] Initiative), the Expanding Quality in Infant Toddler Care (EQIT) course provides training for caregivers of infants and toddlers to improve their knowledge and skills. Course content covers the importance of brain development in the first three years of life; the social-emotional, cognitive, language, and physical development of infants and toddlers; relationship-based care and relationship-based approaches to guiding children’s behavior; partnerships with families; quality curriculum and environments; and health, safety, and nutrition. Completion of the course meets some state licensing requirements, and, when possible, partnerships with local community colleges allow for course participation to result in college credit. These partnerships are also used to encourage participants to consider additional formal coursework. Class sizes are intended to be 20 or fewer caregivers. An orientation may be held before the course begins to introduce instructors, provide an overview of the course, set course expectations, and provide additional information. Participants are also offered the option of receiving on-site coaching through the EQ RELATE coaching model to supplement the course. The coaching supports participants in reflecting on the skills and knowledge learned in the course and integrating this information into the care they provide to their infants and toddlers.

The larger EQ Initiative’s goals involve strengthening the skills and knowledge of caregivers and other professionals working with infants and toddlers by facilitating the professional development of these caregivers, as well as building capacity, leadership, and collaboration at the local level. In addition to the EQIT course, the initiative offers training, coordination, and other support on the Touchpoints approach, the Cradling Literacy curriculum, infant and toddler assessments, and other professional development opportunities. Along with the rest of the EQ Initiative, the EQIT course and EQ RELATE coaching model are overseen by the Colorado Department of Education.

2. Target population, including available languages

- The EQIT course and EQ RELATE coaching model are designed to help any Colorado caregiver or other individual who works with infants and toddlers in group settings, whether in center-based care, family child care, or another setting. Participants must be able to speak...
and write in the language in which the class is offered (English and Spanish). They are not required to have previously completed any formal college coursework.

- The course is offered in English and Spanish. Course handouts are available in English and Spanish.

3. **Targeted outcomes**

- As part of the EQ Initiative, the EQIT course and EQ RELATE coaching model aim to increase the quality of care for infants and toddlers by improving the knowledge and skills of their caregivers in multiple areas, including supporting children’s social-emotional, cognitive, and physical development.

4. **Dosage and program length**

- The EQIT course consists of 16 three-hour modules, for a total of 48 hours of direct class time. It is most commonly conducted as a six-hour class taught on every other Saturday over a 16-week period, but can be scheduled differently depending on local needs and preferences. To facilitate the integration of course content into participants’ work, no more than six hours may be taught per week unless there are extenuating circumstances.

- Coaching is offered during the period of the course, and for course graduates, for up to one year following course completion. The number of hours offered to each participant is determined on an individual basis and may depend on the availability of funding.

5. **Staff requirements, including staff type, education, and experience**

- The EQIT course features team teaching, and at least two qualified instructors must be present at every session.

- Course instructors must complete an 80-hour train-the-trainer course, which includes additional written work, and have previously completed the EQIT course or a similar infant-toddler course. They must obtain approval to be an intermediate-level trainer from Colorado’s trainer approval system. Other requirements include having at least one year of experience working with infants and toddlers; having experience working with families of infants and toddlers; having experience teaching, coaching, or supervising adults; and having knowledge of local programs and resources related to infants and toddlers.

- Coaches must complete an additional two days of training on the EQ RELATE coaching model and tools before offering any coaching. All instructors are encouraged to take this training, even if they do not plan to actively provide coaching. Additional follow-up support is available after completing the coaching training.

- Instructors are expected to continue their professional development by participating in training seminars and other learning opportunities offered by the EQ Initiative. They must attend a minimum of six hours of these opportunities annually to continue teaching the course.

6. **Supports for implementation**

- The EQ Initiative has an implementation handbook for use by course instructors and other local staff. The course has a detailed written curriculum, materials, and supporting resources. Each training team receives a resource library of DVDs, videos, and books.
For the coaching component, some materials (such as a sample coaching agreement, a coaching log, visit forms, and participant journals) are available.

A local team of instructors must be approved by state EQ Initiative program staff to be able to offer the course.

The EQ Initiative has an online reporting system that local teams must use to submit information on training and coaching activities, including the number of hours of coaching received by each participant, on a quarterly basis.

Local changes to the course curriculum must be discussed in advance, documented, and approved by state EQ Initiative program staff. A collection of approved alternate activities for some components is currently being developed; these activities can be substituted locally without obtaining specific approval.

7. Overview of the locations where the model has been or is currently implemented, including types of implementing agencies

The EQIT course and EQ RELATE coaching model are implemented across Colorado by local Early Childhood Councils, who work with the training teams who are approved to offer the course.

B. Summary of existing research

The EQIT course and EQ RELATE coaching model were evaluated in a study (Moreno et al. 2015) that compared five groups of infant/toddler caregivers. The first three groups consisted of caregivers enrolled in the EQIT course who were randomly assigned to receive either no coaching, 5 hours of coaching, or 15 hours of coaching. Coaching began during the course and ended no more than two months after the course concluded. The other two groups consisted of caregivers enrolled in the standardized community college course on infant-toddler theory and practice required by Colorado for certain child care workers, and caregivers not enrolled in any course (the no-intervention group). The study selected sites where the EQIT course was perceived to be delivered with high fidelity; EQIT course and community college course enrollees in these sites were recruited to participate in the study during the first course meeting. The no-intervention group was formed by recruiting caregivers using lists of licensed centers and home-based providers from the state. Participants in the five groups were assessed on (1) teacher-child interactions using the infant and toddler Classroom Assessment Scoring System (CLASS; Hamre et al. 2011); (2) infant-toddler knowledge using a study-designed test (Green et al. 2011); and (3) attitudes and beliefs using an instrument of parenting self-efficacy (Bandura 1993) modified for the study for use with infant and toddler caregivers. Measures were collected at pretest (within two weeks of recruitment), posttest (four to six months after pretest, when the course and/or coaching were complete), and follow-up (four months after posttest). Table 1 provides an overview of the study. Below we discuss the findings from the study.

Across all outcomes, the three EQIT groups and the community college group showed change that was positive and statistically significant in at least one outcome, whereas the no-intervention group tended to exhibit decreases over time for several outcomes. The 15-coaching-hour EQIT group displayed the strongest pattern of positive change over time.
Using a construct of emotional-behavioral support created from specific dimensions of the infant CLASS and toddler CLASS, overall differences in the changes over time of scores for the five groups were close to but not statistically significant at the 0.05 level.

- The community college and 15-coaching-hour EQIT groups showed consistent increases from pretest through follow-up; average effect sizes were about 0.33 and some were statistically significant.

- The no-coaching EQIT group increased from pretest to posttest and decreased (by a smaller magnitude) from posttest to follow-up for an overall increase in score, whereas the no-intervention and five-coaching-hour EQIT groups decreased from pretest to posttest and increased (by a smaller magnitude) from posttest to follow-up for an overall decrease in score.

- The 15-coaching-hour EQIT group experienced the largest improvement over time. The change from pretest to follow-up for this group was significantly greater compared to the change for the other four groups combined, for the no-intervention group, and for the five-coaching-hour EQIT group. However, the change for the 15-coaching-hour EQIT group was not significantly greater than the change for the community college group or for the no-coaching EQIT group. The 15-coaching-hour EQIT group also had the highest score at follow-up, although the significance of this score compared to the follow-up scores for the other groups was not tested.

- Infant CLASS and toddler CLASS dimensions were also used to create a construct for support for language and literacy. Here, the overall differences in the changes over time of scores for the five groups were statistically significant at the 0.01 level. The no-coaching and 15-coaching-hour EQIT groups exhibited consistent increases from pretest through follow-up that were generally statistically significant. The other three groups showed essentially no change in score from pretest to follow-up. Again, the 15-coaching-hour EQIT group experienced the largest improvement over time, one that was significantly greater compared to the change for the other four groups combined and for each individual group except the no-coaching EQIT group. The 15-coaching-hour EQIT group also had the highest score at follow-up, although the researchers did not examine whether this score was significantly different from the scores for the other groups.

- Using the scores on the test of infant-toddler knowledge, the differences in the changes over time of scores for the five groups were not statistically significant. The no-coaching and 15-coaching-hour EQIT groups showed statistically significant increases, with the latter group demonstrating the most positive effect.

- Differences in the changes over time on the measures of self-efficacy for the five groups were also not statistically significant. The community college, five-coaching-hour EQIT group, and 15-coaching-hour EQIT group had statistically significant increases from pretest to posttest. However, all five groups showed decreases from posttest to follow-up, resulting in scores similar to pretest levels.

C. For more information

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D. References


Table 1. Overview of existing research, EQIT & EQ RELATE

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<tr>
<td>Moreno et al. 2015</td>
<td>Comparison groups, with random assignment of coaching dosage within EQIT group</td>
<td>183 caregivers; 161 at posttest and 136 at follow-up; analysis of outcomes using data across all three time points had 120 caregivers (22 no intervention, 23 community college, 28 no-coaching EQIT, 26 5-coaching-hour EQIT; 21 15-coaching-hour EQIT)</td>
<td>Combined sample: mean age 33; 99 percent female; 74 percent white; 11 percent high school education or lower, 25 percent some college credit, 28 percent additional certificate or associate degree, and 35 percent bachelor's degree or higher; 11 percent Child Development Associate credential; mean years of experience with infants (4.8) and toddlers (6.3); mean salary $18,000</td>
<td>CLASS (emotional-behavioral support and support for language and literacy)</td>
<td>Observations conducted by research staff</td>
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<td>Study-designed test of knowledge</td>
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<td>Attitudes and beliefs regarding self-efficacy as a teacher</td>
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FIRST BEGINNINGS (PHILADELPHIA INCLUSION NETWORK)

A. Overview

1. Overview, model components, and content

First Beginnings is a professional development program for caregivers of infants and toddlers in out-of-home settings (centers and family child care homes) that features both training and on-site consultation designed to increase the quality of care children received. Along with similar programs for preschool educators and family care providers, the First Beginnings curriculum was developed and offered as part of the Philadelphia Inclusion Network (PIN). Specifically, First Beginnings consists of the following components:

- Participants take a group training class, which is delivered as a series of core modules and a selection of supplemental modules. Topics include caregiver-child relationships, strategies for promoting learning and development, inclusion and diversity, and working with families.

- Outside of class time, participants complete a project that involves reflecting on and writing about an infant or toddler in their care identified by them as having a special need.

- On-site observation visits are conducted before and after the program to collect measures of the quality of the participants’ classroom environments and their interactions with the children in their care.

- Participants receive on-site consultation visits, which follow a specific protocol that includes a self-assessment, identification of areas for improvement, and a written follow-up plan. During the initial consultation visit, information from the first observation visit is provided to participants and used to help identify the areas for improvement. Consultation strategies include providing/reviewing resources or materials, brainstorming, modeling, and discussion.

First Beginnings and the other PIN professional development programs were developed by the Child and Family Studies Research Programs at Thomas Jefferson University. The program is not currently active, but its materials are available online.

2. Target population, including available languages

- PIN primarily serves caregivers of children from birth to age 5. The First Beginnings curriculum is specifically for caregivers of infants and toddlers (birth to age 3). In studies of the PIN curricula, participating caregivers tended to have extensive experience providing care, and most did not have a college degree.

- The PIN training curricula are designed to support caregivers working in child care settings in low-income urban areas.

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25 Since the completion of the PIN programs, the developers have also created training and materials for caregivers on creating adaptations for routines and activities for children in their care, including infants and toddlers (Campbell et al. 2012; Milbourne and Campbell 2007; Campbell and Milbourne 2014). The materials are based on lessons learned from the PIN program.
• PIN is designed to support caregivers in improving child care quality for all children, with an emphasis on the inclusion of children with disabilities or special needs.

• PIN curricula and services are conducted in English.

3. **Targeted outcomes**

• The PIN training program is designed to increase the quality of care provided to children.

4. **Dosage and program length**

• The modules in the First Beginnings group training class are offered over a three- to four-month period. Program materials mention that the training includes seven modules, but in one study of First Beginnings, five modules were taught. Each module is three hours. PIN materials mention that class sizes usually do not exceed 20 to 25 participants. In the study of First Beginnings, group sizes ranged from 25 to 30 participants.

• The on-site consultation takes place during the same three- to four-month period as the training; a total of three visits are conducted, timed to occur before or after a specific module. Each visit is one hour.

5. **Staff requirements, including staff type, education, and experience**

• PIN does not have specific requirements for the instructors teaching the training class other than prior experience providing training. Instructors include parents of children with special needs, early intervention staff, early childhood educators or staff, or consultants who specialize in providing training or technical assistance in a range of areas. Modules within a particular group training class can be taught by multiple instructors working together.

• Consultation visits are made by the training instructors, by others with early intervention or early childhood backgrounds, or by the staff coordinating the PIN training. In one study of First Beginnings, all eight consultants had at least three years of experience with child care, and half had master’s degrees whereas the others had bachelor’s degrees.

6. **Supports for implementation**

• PIN has an instructor guide, trainer guide, and consultation guide. The First Beginnings modules and other sessions have written materials for participants and instructors. Although the program is not currently active, these materials are available online to support replication.

• The staff coordinating the PIN training are responsible for ensuring continuity during the program, as sessions can be taught by different instructors. This could include orientation and review meetings for instructors, or mentoring and coaching the instructors on activities and teaching strategies. The PIN training coordinators also oversee the consultation (unless they provide it directly) and work with the consultants at the start of the program to go over how the consultation will be provided.

• In a study of First Beginnings, the consultants participated in a three-hour training session before the start of the program.
7. **Overview of the locations where the model has been or is currently implemented, including types of implementing agencies**

- When active, First Beginnings and the other PIN curricula were offered in the Philadelphia area by the program developer (the Child and Family Studies Research Programs at Thomas Jefferson University). The developer also disseminated the PIN materials to organizations interested in offering the program in other locations, including to early intervention consultants in Pennsylvania.

**B. Summary of existing research**

The First Beginnings program for infants and toddlers was evaluated in two studies, which are listed in Table 1. We summarize each study and its findings below.

In one study (Campbell and Milbourne 2005), participating caregivers received either the full First Beginnings curriculum including the on-site consultation, or the curriculum without the consultation component. Participants were recruited from child care programs in specific zip codes in Philadelphia; those who registered were placed in one of five training courses depending on their location. Participants in four of the five courses were offered consultation; the caregivers in these four groups who received consultation formed the consultation group, and the no-consultation group consisted of the caregivers in the fifth group as well as caregivers in the first four groups who did not actually receive consultation (primarily because their program directors refused). The Infant/Toddler Environment Rating Scale (ITERS; Harms et al. 1990) and Arnett Caregiver Interaction Scale (Arnett 1989) were used to assess the quality of caregivers’ classroom environments and of their interactions with children before and after their participation in the program.

- The average of the overall mean score on the ITERS for consultation group classrooms increased from 3.20 before the program to 3.49 after, whereas the average of the overall mean score for no-consultation group rooms decreased from 3.43 before the program to 3.35 after. The difference between the pre-post changes for each group was statistically significant at the 0.01 level, although this could not be clearly attributed to participation in the consultation group.

- ITERS scores also provided quality ratings of inadequate (overall mean score below 3), adequate (3 to 4.99), or good (5 or above). The percentage of consultation group rooms rated adequate or good quality increased from 62 to 71 percent; for the no-consultation group, a decrease from 73 to 69 percent was found. Classrooms were also defined as experiencing observable change if their quality rating changed (or if their rating was good and they experienced a 1-point change in overall mean score). Twenty-one percent of the consultation group classrooms showed an observable change, compared with 8 percent of the classrooms in the no-consultation group.

- The consultation group’s mean score became more favorable on three of the four factors in the Arnett Caregiver Interaction Scale from before the program to after, and less favorable on the fourth factor. The no-consultation group’s mean score became more favorable on two of the four factors and less favorable on the other two factors over time. Differences in pre-post changes for each group were not statistically significant for any of the four factors.
A second study (Campbell et al. 2005) evaluated the overall First Beginnings program and the corresponding PIN curriculum for preschool-age children. This study was similar to the first study and the two had overlapping samples. Potential participants (which could include program directors and non-teaching staff in addition to caregivers) were recruited, and those who registered participated in one of eight training courses using the First Beginnings curriculum. The classroom quality of participating caregivers and their interactions with children were measured using the ITERS and Arnett Caregiver Interaction Scale. Unlike the first study, this research only compared pretest and posttest results for the overall group of participants. Without a comparison group, this study design offers no way to assess what participants’ outcomes would have been in the absence of the training and consultation. Therefore, we cannot make causal inferences that the First Beginnings program caused the observed effect.

- The average of the overall mean score on the ITERS for First Beginnings participants’ classrooms increased from 3.20 before the program to 3.48 after. This was statistically significant at the 0.001 level, with an effect size calculated as 0.52.

- The number of classrooms rated adequate or good increased from 62 percent before the training to 72 percent after. Twenty-two percent of classrooms experienced an observable change in quality.

- Mean scores on three of the four Arnett Caregiver Interaction Scale factors showed almost no change (0.05 points or less on a scale ranging from 1 to 4) after the program, whereas the fourth factor (permissiveness) became less favorable afterwards by 0.26 points.

C. For more information
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D. References


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<tr>
<td>Campbell and Milbourne 2005</td>
<td>Comparison group (not randomly assigned)</td>
<td>180 caregivers in 114 rooms in 60 programs; 123 caregivers in consultation group, 37 in no-consultation group, 20 caregivers with no posttest results</td>
<td>Consultation group vs. no-consultation group: mean age 41 vs. 38; 99 percent vs. 100 percent female; 91 percent vs. 85 percent African American; 79 percent vs. 71 percent high school education or lower and 18 percent vs. 26 percent associate degree or higher; 5 percent vs. 0 percent child development credential; 14 percent vs. 9 percent educational certificate; mean experience in child care 9.8 vs. 7.4 years</td>
<td>ITERS</td>
<td>Observations conducted by trained observer</td>
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<tr>
<td>Campbell et al. 2005</td>
<td>Descriptive/pre-post</td>
<td>First Beginnings: 178 total participants; 154 participants in 70 rooms in 45 centers completed all requirements</td>
<td>First Beginnings: mean age 40; 98 percent female; 89 percent African American; 77 percent high school education or lower and 21 percent associate degree or higher; 4 percent Child Development Associate credential; 18 percent teacher certificate; mean experience in child care 9.6 years</td>
<td>ITERS</td>
<td>Observations conducted by trained observer</td>
</tr>
</tbody>
</table>
A. Overview

1. Overview, model components, and content

The Infant Caregiver Mentoring Project is designed to improve the quality of infant and toddler child care programs through the use of mentoring. Participants in the project are paired with an experienced early childhood professional who serves as their mentor in a one-on-one relationship. The mentoring emphasizes a relationship-based, problem-solving approach. In the first part of the program, the mentor spends time getting to know the participant and observing him or her on site to develop a trusting relationship. After both parties feel comfortable, the mentor begins working more actively with the participant. Mentors focus on being open-minded, collaborative, and supportive of caregivers who are attempting new ideas and strategies. The mentoring program was developed by the Capital Area Early Childhood Training Institute (CAECTI) at The Pennsylvania State University (Penn State). This demonstration project is not currently active, although a manual is available online.

2. Target population, including available languages

- Mentoring participants are Pennsylvania caregivers from center-based child care programs serving children from birth to younger than age 3. All of the child care centers are licensed by the state.
- A majority of caregivers participating in a study of the program had no more than a high school education. These caregivers had an average of almost six years of experience in the early childhood field.
- The mentoring program is conducted in English.

3. Targeted outcomes

- The program focuses on improving the overall quality of the child care environment, especially the quality of caregiver–child interactions and the sensitivity of caregivers to the needs of their children.

4. Dosage and program length

- Mentoring occurs over a four-month period.
- Participants receive approximately 20 hours of mentoring per month for 4 months for a total of 80 hours.

5. Staff requirements, including staff type, education, and experience

- Mentors have a minimum of five to seven years of experience in the early childhood field as both a director and a teacher.

6. Supports for implementation

- The Infant Caregiver Mentoring Project has a manual that defines the program, its goals, and policies. It also has content and references for topics such as relationship building, adult learning, attachment, language development, play, and creating partnerships with parents.
Mentors also use a variety of tools and forms to guide their work with participants, such as a mentoring log, videotaped observations, participant self-assessments, individualized professional development plans, and charts documenting classroom routines and materials. Although the project is not currently active, the manual is available online to support replication.

- Mentors complete seven days of training before the program starts. The topics covered during the training include building relationships as a mentor, other skills to be effective as a mentor, and infant and toddler development.

- Mentors and mentoring staff meet every two weeks to monitor the status of the overall program and ensure a consistent approach. Mentors also meet with the director of the mentoring program on a weekly basis to discuss their progress with each participant.

7. **Overview of the locations where the model has been or is currently implemented, including types of implementing agencies**

- When active, the mentoring program was implemented by the developer (CAECTI at Penn State) at child care centers in south central Pennsylvania. The program did not include any family child care providers.

**B. Summary of existing research**

The Infant Caregiver Mentoring Project was a demonstration project developed and evaluated by CAECTI at Penn State (Fiene 2002). Caregivers were recruited to participate in the study and those who agreed to participate were randomly assigned to a group that received the mentoring intervention or to a comparison group. The evaluation compared results from four measures taken before and after the period during which the treatment group received the mentoring (the comparison group received the mentoring after data collection was complete). The Infant/Toddler Environment Rating Scale (ITERS; Harms et al. 1987) and Arnett Caregiver Interaction Scale (Arnett 1989) were used to observe caregivers on the overall quality of their classroom and interactions with children, and the Knowledge of Infant Development Inventory (KIDI; MacPhee 1981) and the Bloom Scales of Organizational Climate (Bloom 1989) were used to survey caregivers on their knowledge of infant development and perceptions of their center. Table 1 provides an overview of the study. Below we discuss the findings from the study.

- For both the mentoring and comparison groups, the pre-post differences on all four measures (the ITERS, Arnett scale, KIDI, and Bloom scale) were not statistically significant.

- The mentoring group experienced changes from pretest to posttest on two ITERS subscales, routines (average increase in total score = 5 points) and learning activities (average increase = 3 points), that were statistically significant at the 0.005 and 0.05 level, respectively. This group also experienced changes on two Arnett subscales, sensitivity (average increase in total score = 5 points) and appropriate discipline (average increase = 2 points) that were statistically significant at the 0.001 and 0.05 level, respectively. The comparison group experienced one statistically significant change from pretest to posttest, on the ITERS interactions subscale (average decrease = 2 points, significant at the 0.02 level).

**C. For more information**

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D. References


<table>
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<tr>
<th>Study citation</th>
<th>Study design</th>
<th>Sample size/unit of analysis</th>
<th>Sample characteristics</th>
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<th>Data collection methods</th>
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<tbody>
<tr>
<td>Fiene 2002</td>
<td>Randomized controlled trial</td>
<td>52 caregivers</td>
<td>Mean age 36; 77 percent white; 57 percent high school education only, 16 percent some college credit, 21 percent Child Development Associate credential or associate degree, and 7 percent bachelor’s degree or higher Mean experience as a caregiver = 6 years; average salary $10,000 to $15,000</td>
<td>ITERS Arnett Caregiver Interaction Scale KIDI Bloom Scales of Organizational Climate</td>
<td>Observations conducted by research staff Observations conducted by research staff Surveys of caregivers Surveys of caregivers</td>
</tr>
</tbody>
</table>
SEEDS TO SUCCESS

A. Overview

1. Overview, model components, and content

Seeds to Success is a coaching model for providing quality improvement services within a pilot child care quality rating and improvement system. It supports licensed family child care providers, center-based teachers, and child care center directors in improving: (1) the quality of early care and education and (2) staff access to professional development and training. The coaching model, the Consultative Coaching Program for Early Learning Professionals, was developed in 2008 by Thrive by Five Washington, Washington State’s public-private partnership for early learning. The goal of the Consultative Coaching Program is to train coaches to develop a trusting relationship with early learning professionals and help them reflect on their practice (1) in the classroom or in their business and (2) during interactions with the other providers in that setting, with families, and with the children in their care. The Seeds to Success coaches aim to help the professionals stay motivated to attain their quality improvement goals and help establish skills and behaviors that support continuous quality improvement. Providers and coaches develop quality improvement plans that are used to guide the coaching sessions. The plans are based on results of a baseline observation of setting quality. Providers are also eligible to receive quality improvement grants and funds for professional development and to cover the costs of child care for providers’ own children, release time, and books.

The Seeds to Success Modified Field Test was conducted in 2009 in two communities (Boller et al. 2010a, 2010b; Del Grosso et al. 2010). The demonstration project also expanded into three additional communities in 2009 (Joseph et al. 2010). After the demonstration period, the state Department of Early Learning assumed all administration of Seeds to Success and used it to develop the current iteration of Washington’s quality rating and improvement system, which now operates throughout the state and is called Early Achievers. Coaching remains a hallmark of the program. The Early Achievers coaching model is described as practice-based coaching and has three main components, which are similar to the Seeds coaching model: (1) shared goals and quality improvement plans, (2) focused observations guided by the goals and quality improvement plans, and (3) reflecting and sharing feedback. Under Seeds, the coaching and quality improvement grants were provided to providers with all five quality ratings (levels 1 through 5). In Early Achievers, however, these supports are only provided to providers at levels 3 through 5. This reflects Early Achievers’ revised structure for quality ratings, under which providers begin at level 1, complete designated activities to achieve a level 2 rating, and can then earn points through on-site evaluations in several standard areas to reach ratings between levels 3 and 5. Early Achievers also includes professional development, technical assistance, and other supports for providers. The focus of this profile is on the year 1 field test only.

2. Target population, including available languages

- The Seeds model targets licensed family child care providers, center-based teachers, and child care center directors caring for children birth to age 5.
- Coaching is offered in English and Spanish. Written materials are available in English only.
3. **Targeted outcomes**
   - The Seeds model is intended to improve the quality of care provided by participating child care providers.

4. **Dosage and program length**
   - The Seeds to Success Modified Field Test had a six-month implementation period.
   - Center directors, classroom teaching staff, and family child care providers are eligible to receive up to eight hours of in-person coaching per month. Coaching hours for center classrooms are divided between lead teachers and assistants, with more hours intended for lead teachers.

5. **Staff requirements, including staff type, education, and experience**
   - For the coaches, the implementing agencies seek individuals with experience and expertise in early childhood development, child care, culturally appropriate practice, and adult learning theories. In addition, the agencies seek bilingual individuals to work with the providers in their communities.

6. **Supports for implementation**
   - In preparation for implementation, coaches participate in multiple training sessions, including trainings on coaching, the Environment Rating Scales (ERS), and the administrative data system used to track the provision of coaching.
   - During the implementation period, coaches are supervised by the site coordinators at the implementing agencies during team and one-on-one meetings. During the field test, in one community, coaches’ supervision was offered weekly. In the other community, supervision was offered monthly. Coaches also have the opportunity to meet with a mentor coach.
   - The implementing agencies use an administrative data system to track the provision of coaching, including the amount of coaching participants receive, the content of the coaching, and how the coaching aligns with stated goals in the participants’ quality improvement plans.

7. **Overview of the locations where model has been or is currently implemented, including types of implementing agencies**
   - For the field test, the Seeds model was implemented in two Washington State communities in family child care homes and child care centers.

**B. Summary of existing research**

An impact and implementation evaluation of the Seeds model was conducted in 2009 (Boller et al. 2010b). The impact evaluation was designed to determine whether the coaching model and financial incentives implemented as part of Seeds affected the quality of services provided by participating child care businesses (in both family home and center settings),

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26 The Environment Rating Scales include the Infant/Toddler Environment Rating Scale-Revised (ITERS-R; Harms et al. 2003), the Early Childhood Environment Rating Scale-Revised (Harms et al. 1998), and the Family Child Care Environment Rating Scale-Revised (Harms et al. 2007).
compared with those businesses that did not receive Seeds. Across two communities, 52 family child care providers and 14 centers that volunteered to participate were randomly assigned into treatment and control groups. The treatment group received the intervention described in this profile; the control group received funds only for professional development opportunities and supports. The goals of the implementation study were to determine whether Seeds met its goals of providing intensive, high quality coaching and other supports to participating providers and to capture the lessons learned about implementation during the field test.

Data sources for the Seeds impact study included classroom observations, self-administered questionnaires for center directors and educators (lead and assistant teachers), and interviews with family child care providers. Observations conducted at the start (baseline) and at the end (follow-up) of the field test included the ERS, the Arnett Caregiver Interaction Scale (Arnett 1989), and counts of children and adults to calculate child-adult ratios and group sizes. Data sources for the Seeds implementation study included (1) interviews and focus groups with site coordinators, coaches, and child care staff during site visits conducted by the evaluation team in June and November 2009; and (2) service use data collected by coaches and site coordinators from June through December 2009 and analyzed by the evaluator in winter 2010.

Table 1 provides an overview of the study. The main impact study findings include the following:

- Family child care providers in the treatment group were not more likely than providers in the control group to be enrolled in an education or training program. However, Seeds did improve center-based lead and assistant teacher enrollment in an education or training program, and significantly more lead teachers in the treatment group than in the control group attended college courses at least weekly.

- At follow-up, family child care providers and center-based lead and assistant teachers in the treatment group were significantly more likely than those in the control group to report visits from a coach at least weekly.

- At follow-up, there was no consistent pattern of positive impacts of Seeds on family child care providers’ educational attainment. More center-based teachers in the treatment group than in the control group earned three credits in the past six months, but Seeds had no impact on completion of a postsecondary degree for center lead teachers and assistants.

- Lead teachers in the treatment group were significantly less likely than lead teachers in the control group to leave their centers during the study period (19 percent of treatment group lead teachers who completed baseline questionnaires left by follow-up, versus 45 percent in the control group).

- Child care businesses in the treatment group had significantly higher child care observed quality scores at follow-up than businesses in the control group. For both family child care providers and child care centers in the treatment group, the ERS total score and most of the ERS subscale scores were significantly higher than control group scores. Among infant and toddler center-based classrooms, the ITERS-R total scores for the treatment classrooms was significantly higher than for the comparison classrooms (4.65 versus 2.85, respectively).

The main implementation study findings include the following:
The coaches and providers were able to implement the intensive coaching component of the Seeds model. On average, the amount of coaching providers received adhered to the Seeds model; however, participants had a range of experiences. On average, family child care providers, center directors, and lead teachers received 6 to 11 hours of coaching per month.

Across all providers, quality improvement grants were most commonly used for supplies and materials. During focus groups, providers described using funds to pay for (1) materials, including books and art materials; (2) larger items, such as child-size tables and outdoor play equipment; and (3) safety improvements.

According to administrative data, across communities, one-third to one-half of family child care providers and at least one staff person in each child care center received funding for professional development opportunities for their staff.

During focus groups, providers described several barriers that deterred them from using the professional development opportunities, including (1) limited availability of trainings and classes, particularly near their places of employment or homes; (2) lack of trainings and classes that provided new or relevant information; and (3) low perceived “payoffs” to professional development, because salaries were unlikely to increase as a result of completion of professional development.

C. For more information

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D. References


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<tr>
<th>Study citation</th>
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<th>Sample characteristics</th>
<th>Measures</th>
<th>Data collection methods</th>
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<tr>
<td>Boller et al. 2010b</td>
<td>Randomized controlled trial; implementation study</td>
<td>52 family child care providers and 14 child care centers initially randomly assigned</td>
<td>Family child care providers:</td>
<td>Infant/Toddler Environment Rating Scale-Revised (Harms et al. 2003); the Early Childhood Environment Rating Scale-Revised (Harms et al. 1998); the Family Child Care Environment Rating Scale-Revised (Harms et al. 2007).</td>
<td>Observation</td>
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<td>49 family child care providers (26 treatment and 23 control) and 14 child care centers (7 treatment and 7 control) participated in study</td>
<td>Average age 45; 57 percent Hispanic, 15 percent white non-Hispanic, and 26 percent other race or ethnicity; 45 percent less than a high school education and 14 percent associate degree, bachelor’s degree, or completed graduate work; average years of experience in current job more than 6 years</td>
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<td>Observation</td>
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<td>Child care center staff:</td>
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<td>Observation</td>
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<td>Average age: center directors 43, lead teachers 35, assistant teachers 29; child care center staff most frequently white non-Hispanic; associate degree, bachelor’s degree, or higher: center directors 56 percent, lead teachers 30 percent, assistant teachers 17 percent; average years of experience in current job: center directors 6 years, lead teachers 4 years, assistant teachers 3 years</td>
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<td>Observation</td>
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<td>Service use data collected by coaches</td>
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<td>and site coordinators</td>
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SMART SUPPORT (EARLY CHILDHOOD MENTAL HEALTH CONSULTATION)

A. Overview

1. Overview, model components, and content

   Smart Support is Arizona’s system of early childhood mental health consultation. It partners mental health consultants with early care and education providers to promote the social and emotional development of the children in their care, and to help them respond to children with behavioral challenges. A consultant first meets with a provider to explain the consultation services, confirm such services are appropriate for the provider’s needs, and verify that the provider remains interested in receiving these services. If so, the consultant works with the provider to develop an individualized plan that describes how services will be provided.

   Three types of consultation can be provided in different combinations depending on provider needs and preferences: (1) program consultation focuses on the provider’s entire setting; (2) classroom consultation works with a teacher to improve his or her skills or outcomes in the classroom; and (3) child-centered consultation involves helping staff and parents develop a plan to support care for a child exhibiting difficult behaviors. Services provided by consultants may also include training as well as referrals to other services and resources. Regardless of the specific services offered, Smart Support uses several core components, tools, and techniques as its framework for consultation. These include the Teaching Pyramid Model from the Center on the Social and Emotional Foundations for Early Learning as well as the FAN approach developed by Dr. Linda Gilkerson at the Erikson Institute to guide interpersonal communication with caregivers.27 Southwest Human Development, a nonprofit provider of early childhood services, designed and administers the program.

2. Target population, including available languages

   • Smart Support works with child care providers for children from birth to age 5, including child care centers and preschools as well as family child care providers. To be eligible, a provider must be licensed or regulated by the appropriate Arizona state agency. Smart Support can also provide mental health consultation to home visiting and family, friend, and neighbor programs.

   • Smart Support primarily offers services in English and has a limited capacity to provide services in Spanish.

3. Targeted outcomes

   • Smart Support’s activities are intended to improve several short-term outcomes, including: the emotional climate in programs and classrooms; staff interactions with parents and other staff (this includes teachers and non-teaching staff such as administrators); teacher attitudes, beliefs, and knowledge; teacher–child relationships; child behavior; involvement with early intervention services; and reduced risk of expulsion.

27 The term “FAN” is not an acronym but refers to the shape of the visual representation of the approach.
• The intended long-term outcome is an increased capacity of early childhood settings to meet children’s social and emotional needs.

4. **Dosage and program length**

• The period of service is not set at the beginning of the program; rather, consultants encourage providers to work with them to set specific goals at the beginning of services, with the idea that the consultation will end after the consultant and provider agree that these goals have been met. The average length of participation is approximately one year, but this varies and can range from several months to much longer than one year.

• The primary component of consultation consists of in-person, on-site visits from the consultant, which are required to occur at a regular day and time. Visits usually occur weekly and last two to three hours. When appropriate, visits can be offered more or less frequently than weekly.

5. **Staff requirements, including staff type, education, and experience**

• Mental health consultants must have a master’s-level degree in a mental health discipline. They must have experience working with young children and their families and caregivers.

• Supervisors of mental health consultants must have a license in a mental health field and at least five years of experience working with children, groups of children, or their families and caregivers. They must also have supervisory experience using reflective supervision or a similar approach.

6. **Supports for implementation**

• Smart Support has an implementation manual, a logic model, and a database with forms, data collection reports, and resources. The implementation manual describes in detail the step-by-step process for providing consultation, to ensure consistent service delivery and fidelity to the Smart Support model.

• New consultants go through a week-long orientation that includes 16 classroom hours, and shadow with experienced consultants. Their first year of employment serves as an extended orientation and includes the completion of a series of trainings on attachment, trauma, self-regulation, and other subjects as well as quarterly meetings that review key aspects of the consultation model. Other ongoing professional development activities for all consultants include a monthly book club, regular training opportunities (which may be required, or optional training that a consultant can request to attend), and weekly meetings with supervisors that use a reflective supervision approach.

• After completing the initial week-long Smart Support orientation, supervisors receive three hours of training per week for one month to support them in fully assuming their supervisory role. This training covers all aspects of the supervisory process. During this time, they also discuss topics in child development in small groups, shadow with experienced consultants to observe them in different stages of consultation, and sit in or participate in other meetings.

• Supervisors are responsible for ensuring fidelity to the Smart Support model. This primarily occurs through the weekly reflective supervision meetings with consultants that incorporate both case-based reflective discussion and administrative oversight to form a blended model of supervision.
Supervisors also participate in their own weekly meetings with senior Smart Support leadership that use reflective supervision; they also have their own monthly book club.

7. **Overview of the locations where the model has been or is currently implemented, including types of implementing agencies**

- Smart Support operates in Arizona in areas whose regional councils of First Things First (the state’s early childhood development system) dedicate some of their funding for the program. These regions contain a large proportion of the state’s population.

- Mental health consultants are hired by Southwest Human Development or another agency, depending on the location in the state. Southwest Human Development supervises and trains all consultants and supervisors.

**B. Summary of existing research**

Smart Support’s first year of implementation in 2010–2011 was the subject of an evaluation report (Shivers n.d.). This evaluation collected administrative data on program activities; information on the characteristics of the mental health consultants who provided services; surveys and self-assessments from teachers, child care program directors, and consultants; teacher-reported child data; and observations of classroom environments. Information collected from participating teachers and administrators was obtained at the beginning of the program and six months later, while they were still receiving services. The component of the study involving implementation is summarized in Table 1 and findings are discussed below. Only 21 percent of teachers in the first-year evaluation reported caring for infants and toddlers (birth to age 3).

- According to administrative data on services delivered, Smart Support mental health consultants visited teachers once per week on average, spending an average of 2.3 hours on site per week. Each consultant also facilitated an average of 6 training sessions and made an average of 21 referrals (which could be for children or families, or for directors, teachers, or child care programs). Consultants worked with teachers to create an average of 2.9 written action plans for specific children per teacher.

- Consultants’ average age was 41, 94 percent were female, and all held a master’s degree or higher. Consultants’ primary field of expertise was either in mental health (49 percent), education (30 percent), or both (21 percent). Their average experience providing early childhood-related services was 11.1 years; average experience providing consultation, coaching, or training was 6.5 years; and average experience providing early childhood consultation was 5.4 years.

- Consultants were asked to self-rate their level of consulting knowledge and skills using a scale with five domains: basic knowledge, systems change, personal characteristics, communication, and collaborative problem solving (Buysse and Wesley 2005). On the scale of 1 (low) to 5 (high), consultants’ average overall score was 4.32. The average score on each domain was greater than 4, with personal characteristics having the highest score and basic knowledge the lowest score.

- The report also included findings from the other sources, such as teacher-reported child data and observations of classroom environments. However, we did not review these findings because they are not disaggregated by child age and only 21 percent of participants cared for
infants and toddlers. In addition, several of the measures seem to only apply to preschool-age children and classrooms, which made them outside the scope of this report.

Smart Support has also released a one-page summary of evaluation findings of services provided from 2010 to 2014 (Southwest Human Development and Indigo Cultural Center 2015). Data involving 799 teachers and 1,028 children from 411 child care programs (94 percent of which were center-based providers) were collected at baseline and after 6 months and 12 months of Smart Support services. Positive, statistically significant results were found for several outcomes, including classroom emotional climate, teacher-child relationships, and children’s self-regulation. However, an evaluation report containing these findings has not yet been produced.

C. For more information

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D. References


**Table 1. Overview of existing research, Smart Support**

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<tr>
<td>Shivers n.d.</td>
<td>Implementation; pre-post</td>
<td>47 consultants; 305 teachers at 199 child care centers and 14 family child care providers receiving services; 243 teachers at 147 child care centers and 5 family child care providers in evaluation</td>
<td>Centers/providers: mean of average daily attendance 55; 24 percent nationally accredited; 49 percent serving mostly low-income families and 29 percent serving mostly low- to mid-income families Teachers: mean age 36; 98 percent female; 53 percent white and 31 percent Latino; 52 percent high school education or lower, 21 percent Child Development Associate credential or relevant associate degree; 21 percent bachelor’s degree or higher; mean experience as a caregiver 10 years</td>
<td>Program activities Consultant characteristics Consultant Knowledge and Skill Inventory (self-assessment)</td>
<td>Program administrative data Questionnaire completed by consultants Questionnaire completed by consultants</td>
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CURRICULA MODELS
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A. Overview

1. Overview, model components, and content

The Assessment, Evaluation, and Programming System (AEPS), Second Edition, Curriculum for Birth to Three Years provides activities that are arranged to meet the changing needs of children as they develop. The curriculum is designed to support caregivers in matching a child’s goals and activities with activity-based intervention strategies based on the child’s age and current level of development. These strategies involve working on goals and objectives within the children’s routine (for example, mealtimes, bathing, and dressing), planned activities (for example, activities organized by an adult, such as painting), and spontaneous activities that capitalize on children’s daily interactions with their social and physical environments to facilitate skill development. The curriculum is linked to the AEPS Test, an assessment designed to help teachers select and evaluate goals and objectives that are most appropriate for each individual child in key developmental areas. Overall, AEPS includes two sets of assessment and curriculum materials, one for children birth through age 3 and one for children age 3 through 6. The system is supported by a web-based data management system known as AEPSi, which caregivers can use to enter assessment information; link this information to goal development, intervention, and evaluation; and produce a variety of reports, including those that meet federal reporting requirements. AEPS was developed by Diane Bricker, Ph.D., and colleagues from the University of Oregon and is published by Brookes Publishing.

2. Target population, including available languages

- The curriculum is targeted to professionals (including early childhood educators in general, as well as special education teachers, early interventionists, family service coordinators, administrators, physical therapists, speech-language pathologists, and occupational therapists) working with children birth to age 3. AEPS was specifically developed for use with children who have disabilities or are at risk for developmental delays, but it can be used with all children.
- AEPS Curriculum for Birth to Three Years is only available in English.

3. Targeted outcomes

- AEPS Curriculum for Birth to Three Years targets outcomes in the following areas: fine motor, gross motor, adaptive, cognitive, social-communication, and social.\(^{28}\)

4. Dosage and program length

- Information about dosage and program length is not specified by the curriculum.

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\(^{28}\) The adaptive area consists of goals and objectives involving feeding, personal hygiene, and undressing.
5. **Staff requirements, including staff type, education, and experience**
   - The curriculum is designed to be implemented by professionals, but education or experience requirements for staff are not specified on the AEPS website, and the developer did not clarify whether there are any requirements.

6. **Supports for implementation**
   - AEPS Curriculum for Birth to Three Years includes an overview that provides background information about the curriculum and describes guidelines for using the curriculum.
   - Trainers are available to conduct training seminars on the AEPS assessment and curriculum materials at implementing agencies. Training topics on the AEPS curriculum include the content and organization of the curriculum; how to link the AEPS assessment and curriculum; how to use the curriculum within an activities-based approach; individualizing instruction for young children using the curriculum; and working on goals and objectives within daily routines and planned intervention activities. Training topics can be modified to meet the needs of the participating professionals who will use AEPS.
   - Fidelity guidelines and tools for monitoring fidelity of the AEPS Curriculum for Birth to Three Years are not specified on the AEPS website, and the developer did not clarify whether these are available.

7. **Overview of the locations where the model has been or is currently implemented, including types of implementing agencies**
   - AEPS Curriculum for Birth to Three Years is implemented in early intervention/Individuals with Disabilities Education Act (IDEA) Part C programs, early child care programs, and Early Head Start programs.

B. **Summary of existing research**
   - We did not identify any research on the AEPS Curriculum for Birth to Three Years that fell within the scope of this report.  

C. **For more information**

   Brookes Publishing
   800-638-3775
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29 The existing research base includes studies of the psychometric properties of the AEPS assessment tools (inter-observer and test-retest reliability, internal consistency, and congruent validity); most studies focused specifically on children with disabilities.

65
D. References

THE CREATIVE CURRICULUM® FOR FAMILY CHILD CARE, SECOND EDITION

A. Overview

1. Overview, model components, and content

The Creative Curriculum for Family Child Care, Second Edition, is a curriculum designed to help family child care providers: (1) set up the learning environment; (2) plan developmentally appropriate routines and activities for every day of the week; (3) promote children’s learning and development in the areas of social-emotional, physical, language, cognitive, literacy, mathematics, science and technology, social studies, the arts, and English-language acquisition; and (4) build partnerships with parents. The curriculum includes two volumes. Volume 1: The Foundation covers the research that informed the development of the curriculum, how children develop and learn, organizing the home and daily schedule, caring and teaching, and building partnerships with families. Volume 2: Routines and Experiences discusses routines and experiences that promote development and learning of children birth to age 12 and describes strategies providers can use to implement these routines and experiences. The curriculum’s learning objectives are intended for children birth through kindergarten, with the understanding that older children will have learning objectives from school. To make it easier for caregivers to implement activities, the curriculum also includes 68 Creative Curriculum LearningGames offering suggestions for helping families and caregivers interact with children, a list of necessary materials, and ways to adapt the activities to children’s ability levels; a DVD about caregiving in the family child care setting and how children learn; and a CD-ROM with copies of forms and letters to parents. Versions of the curriculum for infant and toddler and preschool center-based classrooms are also available. The Creative Curriculum for Family Child Care was developed by Diane Trister Dodge, M.S., founder of Teaching Strategies, and colleagues Sherrie Rudick, M.S., and Laura J. Colker, Ed.D.

2. Target population, including available languages

- The curriculum is targeted to family child care providers caring for children birth to age 12.
- The 68 Creative Curriculum LearningGames are available in Spanish and English; the CD-ROM includes Spanish and English versions of forms and letters to parents.

3. Targeted outcomes

- The Creative Curriculum for Family Child Care targets learning and development in the areas of social-emotional, physical, language, cognitive, literacy, mathematics, science and technology, social studies, the arts, and English-language acquisition for children birth to age 12.

4. Dosage and program length

- Information about dosage and program length is not specified by the curriculum.

5. Staff requirements, including staff type, education, and experience

- No requirements for staff are specified on the Creative Curriculum website, and the developer did not clarify whether there are any requirements.
6. **Supports for implementation**

- The curriculum includes implementation guidelines and training sessions designed to help family child care providers foster development and learning objectives among the children in their care.

- Providers using the curriculum or overseeing settings using the curriculum are encouraged to familiarize themselves with the curriculum materials, including the two volumes and the LearningGames. The DVD on caregiving and learning also helps providers understand the purpose and use of the curriculum materials.

- Teaching Strategies offers a one- to two-day training for providers on The Creative Curriculum for Family Child Care. Trainings are offered on site in community locations.

- Tools for monitoring fidelity of The Creative Curriculum for Family Child Care are not specified on the Creative Curriculum website, and the developer did not clarify whether these tools are available. Teaching Strategies does offer coaching and fidelity resources for the preschool version of the Creative Curriculum and the preschool version of its comprehensive assessment, *Teaching Strategies GOLD*.

7. **Overview of the locations where the model has been or is currently implemented, including types of implementing agencies**

- The Creative Curriculum for Family Child Care may be used in a variety of settings, including rural and urban locations.

- The curriculum is intended for implementation by a variety of family child care providers, including daily or bi-weekly programs. Separate versions of the curriculum are available for center-based providers serving infants and toddlers and preschool-aged children. Family child care providers serving *only* infants and toddlers or *only* preschool-aged children may also use the versions of the curriculum developed specifically for those age groups, instead of The Creative Curriculum for Family Child Care.

B. **Summary of existing research**

We did not identify any research on The Creative Curriculum for Family Child Care.

C. **For more information**

Teaching Strategies
Email: info@teachingstrategies.com

Contact information for regional sales representatives is listed on the website:
http://teachingstrategies.com/sales/regional-managers/

D. **References**

THE CREATIVE CURRICULUM® FOR INFANTS, TODDLERS & TWOS, THIRD EDITION

A. Overview

1. Overview, model components, and content

   The Creative Curriculum for Infants, Toddlers & Twos, Third Edition is an early childhood education curriculum that is designed to help teachers (1) set up the learning environment; (2) plan developmentally appropriate routines and experiences for every day of the week; (3) promote children’s social-emotional, language, cognitive, and physical development, as well as content area learning in literacy, mathematics, science and technology, social studies, and the arts; and (4) build partnerships with families. The curriculum comprises three foundational volumes and several additional resources, including Book Conversation Cards; Mighty Minutes for Infants, Toddlers & Twos; Intentional Teaching Cards; The Creative Curriculum LearningGames; and Highlights Hello magazines. Volume 1: The Foundation outlines the research that informed the development of the curriculum and discusses the five central components of nurturing care and teaching. Volume 2: Routines and Experiences discusses routines and experiences that promote development and learning of children birth to age 3 and explains how teachers can plan to implement these routines and experiences intentionally while maintaining the flexibility to respond to the changing interests and abilities of young children. Volume 3: Objectives for Development & Learning, Birth Through Third Grade describes skills, knowledge, and behaviors that promote the continuing development and learning of infants and toddlers and includes guidance to help teachers observe children effectively. It also describes (1) 38 objectives for development and learning, (2) two dedicated objectives for English-language acquisition for preschool- and elementary-aged children, (3) developmental progressions that show widely held expectations for children, and (4) research findings relating to each objective and strategies for teaching responsively. Related materials that are available separately from the curriculum include two training videos, Celebrating Language and Literacy for Infants, Toddlers & Twos, which explores the development of early literacy skills in the context of caring relationships with adults, and Strategies for Early Language and Literacy Development, which demonstrates how everyday routines, experiences, and environments support children’s language development. Other materials include guides for families on ways they can extend classroom activities at home and Teaching Strategies GOLD, an observational assessment for children from birth through third grade. Versions of the curriculum for center-based preschool classrooms and family child care providers are also available. The Creative Curriculum for Infants, Toddlers & Twos was developed by Diane Trister Dodge, M.S., founder of Teaching Strategies, and colleagues Kai-lee Berke, M.S., Sherrie Rudick, M.S., and Heather Baker, M.L.S. The third edition of the curriculum was recently published; previously, the most recent version was the second edition, revised.

2. Target population, including available languages

- The curriculum is targeted to caregivers of children birth to age 3.
- The curriculum is available in English and Spanish.
3. **Targeted outcomes**
   - The Creative Curriculum for Infants, Toddlers & Twos targets 38 objectives for development and learning, including those related to social-emotional, language, cognitive, and physical development, as well as content area learning in literacy, mathematics, science and technology, social studies, and the arts.

4. **Dosage and program length**
   - Information about dosage and program length is not specified by the curriculum.

5. **Staff requirements, including staff type, education, and experience**
   - No requirements for staff are specified on the Creative Curriculum website, and the developer did not clarify whether there are any requirements.

6. **Supports for implementation**
   - The curriculum includes implementation guidelines and strategies designed to help teachers foster development and learning objectives among the infants and toddlers in their care. Training materials are available, including DVDs and a training guide.
   - Staff using the curriculum or overseeing classrooms using the curriculum are encouraged to familiarize themselves with the curriculum materials. The Guide to The Creative Curriculum for Infants, Toddlers & Twos also helps providers understand the purpose and use of the curriculum materials. Online, self-guided tutorials are also available to help Teaching Strategies GOLD users explore the purpose and use of the curriculum’s learning and development objectives.
   - Teaching Strategies offers a variety of professional development opportunities on the curriculum for teachers and administrators. Sessions are generally available either at an implementing agency site or at Teaching Strategies’ Professional Development Center.
     - Training topics for teachers on The Creative Curriculum for Infants, Toddlers & Twos include: how to observe and plan responsively and partner with families to inform teaching and caregiving; how to use the objectives for development and learning to plan a responsive and developmentally appropriate program; strategies based on trust and mutual respect for supporting families; how materials and experiences support young children’s development of language and literacy skills; how to use the routines to build trusting relationships with children and promote development and learning; and how to observe and plan experiences to scaffold children’s learning.
     - Training for administrators focuses on how to effectively build teams and support teachers in implementing the curriculum.
   - Currently, Teaching Strategies offers coaching and fidelity resources only for the preschool version of the curriculum and the preschool version of its comprehensive assessment, *Teaching Strategies GOLD*. However, it plans to publish *Coaching to Fidelity, Infants, Toddlers & Twos Edition*, by the end of 2015.
7. **Overview of the locations where the model has been or is currently implemented, including types of implementing agencies**

- Information about the locations where the curriculum is implemented is not specified on the Creative Curriculum website, but it does note that it has been implemented across the country.

- The Creative Curriculum for Infants, Toddlers & Twos is used by center-based early childhood programs of various types, lengths, and settings. These include rural Migrant and Seasonal Head Start programs, urban Early Head Start programs, and other center-based Early Head Start programs. A separate version of the curriculum is available for family child care providers.

**B. Summary of existing research**

We did not identify any research on The Creative Curriculum for Infants, Toddlers & Twos.

**C. For more information**

Teaching Strategies  
Email: info@teachingstrategies.com  

Contact information for regional sales representatives is listed on the website:  

**D. References**

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HAWAII EARLY LEARNING PROFILE (HELP) 0-3

A. Overview

1. Overview, model components, and content

The Hawaii Early Learning Profile (HELP) 0-3 is a comprehensive, ongoing, curriculum-based assessment process for use by providers working with infants and toddlers and their families. The HELP 0-3 system includes: (1) the assessment; (2) a family interview designed to assess children’s developmental skills and behaviors and identify family concerns, priorities and resources; (3) the HELP Activity Guide, a curricular resource that includes activities linked to each skill assessed by the HELP assessment, which caregivers can use with children; (4) HELP at Home, a curriculum designed for providers to individualize and give to families to use with their children; and (5) HELP When the Parent has Disabilities, an activity guide adapted to accommodate parents who have disabilities. The curriculum components can be used by families (guided by providers) or out-of-home caregivers. The HELP 0-3 system covers 685 developmental skills and behaviors across the following six domains: cognitive, language, gross motor, fine motor, social-emotional, and self-help. HELP 0-3 products are cross-referenced through skill identification numbers for easy linking between assessment and curriculum materials. Programs implementing HELP 0-3 can choose to use KinderCharts.net, an online system designed to measure children’s developmental progress in essential domains. Although KinderCharts is a separate system, it is directly aligned with the HELP 0-3 assessments, so providers can enter assessment results and use KinderCharts to produce a variety of progress reports, including reports that meet Early Head Start requirements. Versions of the assessment and curriculum for children ages 3 to 6 are also available. The materials are published by the VORT Corporation.

2. Target population, including available languages

- HELP 0-3 is designed for use by parents and non-parental caregivers of children birth through age 3 as well as for use by Individuals with Disabilities Education Act (IDEA) Part C early intervention providers for infants and toddlers who have developmental concerns.
- The assessment and Activity Guide are available in English only; however, some supporting materials, such as HELP at Home, are available in Spanish.

3. Targeted outcomes

- HELP 0-3 targets outcomes in the following domains: cognitive, language, gross motor, fine motor, social-emotional, and self-help.

4. Dosage and program length

- HELP 0-3 provides materials relevant for a three-year period (from birth to age 3). The frequency of assessment and intervention is based on individual needs.

5. Staff requirements, including staff type, education, and experience

- There are no staff requirements, but if HELP 0-3 is being used for the Part C assessment process, staff should meet their state’s definition of qualified personnel, which may include specific licenses or certifications. If HELP 0-3 is being used as a curricular program for
children who do not have significant developmental delays or disabilities, then any staff with experience and knowledge of infant-toddler development can implement the curriculum.

6. **Supports for implementation**
   - Inside HELP is an administration and reference manual that provides assessment guidelines and procedures needed to implement all components of the HELP 0-3 system. Additional instructions are provided in each individual product.
   - Onsite and online training opportunities on the HELP 0-3 system are available through VORT (see the website for more information).
   - Fidelity guidelines and tools for monitoring fidelity of the HELP 0-3 system are not specified on the HELP website, and the developer did not clarify whether these are available.

7. **Overview of the locations where the model has been or is currently implemented, including types of implementing agencies**
   - HELP 0-3 is being implemented throughout the United States.
   - HELP 0-3 is implemented by a range of agencies including child care centers, Early Head Start programs, Part C providers, and hospitals. The HELP website does not specify whether the system is also intended for use by family child care providers, and the developer did not clarify whether this is the case.

B. **Summary of existing research**
   We did not identify any research on the HELP 0-3 curriculum materials that fell within the scope of this report.³⁰

C. **For more information**
   VORT Corporation
   888-757-VORT (8678) (toll-free) or 650-322-8282
   [http://www.vort.com](http://www.vort.com)

D. **References**

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³⁰The existing research base includes studies of the psychometric properties of the HELP assessment tools (interobserver and test-retest reliability, congruent validity and internal consistency); one study focused on using the HELP in home-based programs.
A. Overview

1. Overview, model components, and content

   The HighScope Infant-Toddler Curriculum uses a process of active learning—called active participatory learning—that consists of experiences and exploration with people, materials, events, and ideas. During active learning, caregivers scaffold (support and gently extend) infant and toddler learning by encouraging them to investigate the world around them. Learning and development are anchored by long-term, trusting relationships with caregivers. The curriculum is organized around six content areas and includes guidance for caregivers on teaching practices designed to support children’s growth and learning. The six content areas are: (1) approaches to learning; (2) social and emotional development; (3) physical development and health; (4) communication, language, and literacy; (5) cognitive development; and (6) creative arts. The teaching practices include adult–child interactions, arrangement of the physical environment, the use of daily schedules and routines, and observations and planning for children. The curriculum is linked to HighScope’s comprehensive online child assessment tool, called the Child Observation Record (COR) Advantage, which covers development from birth through kindergarten. Preschool and elementary school versions of the curriculum are available. The HighScope Educational Research Foundation developed the HighScope Infant-Toddler Curriculum.

2. Target population, including available languages

   - The curriculum is targeted to children birth to age 3 and their out-of-home caregivers. Materials are also available to help families extend early learning from the classroom into the home.
   - The curriculum manual, Tender Care and Early Learning: Supporting Infants and Toddlers in Child Care Settings (Post et al. 2011), is available in English and Spanish. COR Advantage is also available in English and Spanish, as are many of the support materials and resources (for example, DVDs).

3. Targeted outcomes

   - The HighScope Infant-Toddler Curriculum targets 42 key developmental indicators across six content areas: (1) approaches to learning; (2) social and emotional development; (3) physical development and health; (4) communication, language, and literacy; (5) cognitive development; and (6) creative arts.

4. Dosage and program length

   - The curriculum is appropriate for part-day and full-day programs.

5. Staff requirements, including staff type, education, and experience

   - HighScope programs adhere to the staffing requirements of the appropriate licensing agency and/or program auspices (such as Early Head Start).
   - HighScope offers a wide range of in-person and online staff development options. Caregivers who complete a rigorous 20-day training program can meet the requirements for
HighScope teacher certification, based on demonstrated curriculum knowledge and documented teaching practices.

- Programs in which all lead caregivers are certified and which have met additional standards for parent involvement, staff development, ongoing assessment, and management and operations can also earn HighScope program accreditation.

6. **Supports for implementation**

- The HighScope Infant-Toddler Curriculum manual (Post et al. 2011) includes implementation guidance, and accompanying teacher idea books and DVDs provide support for the implementation of key teaching practices. The manual is available in English and Spanish, and the DVDs are offered in English and include Spanish subtitles.

- HighScope offers a range of training options, including workshops, weeklong and multiweek trainings, and online offerings. The multiweek training course, required to become a HighScope certified teacher, is four weeks (20 days) spread across a 12-month calendar year and is offered onsite and at HighScope’s headquarters. COR Advantage training is also available in-person and online.

- HighScope also offers customized on-site training and technical assistance for programs, as well as on-site observation and feedback, followed by mentoring and coaching.

- HighScope’s Infant-Toddler Program Quality Assessment is designed to assess program quality and implementation of the HighScope Infant-Toddler Curriculum.

7. **Overview of the locations where the model has been or is currently implemented, including types of implementing agencies**

- The HighScope Infant-Toddler Curriculum is implemented in programs throughout the United States, as well as internationally.

- The HighScope Infant-Toddler Curriculum is used in a wide variety of program settings including public and private, and nonprofit and for-profit agencies. Settings include private child care centers, state-funded early childhood programs, and Early Head Start programs.

B. **Summary of existing research**

We did not identify any research on the HighScope Infant-Toddler Curriculum.

C. **For more information**

HighScope Educational Research Foundation
Email: info@highscope.org
http://www.highscope.org/

D. **References**


III. GAPS IN THE KNOWLEDGE BASE AND IMPLICATIONS FOR FUTURE RESEARCH

LITES identified 13 compelling models that are of interest to the ECE field for supporting infant and toddler early learning in out-of-home care settings. The models are in different stages of development, and most, but not all, have engaged in some implementation or descriptive outcomes research. Yet, all could benefit from further development and evaluation. Once the models are well developed and producing potentially positive child outcomes as demonstrated through descriptive research (such as pre-test post-test designs), they should then be rigorously tested to assess their effects on child outcomes.

As anticipated, because this component of LITES focused on identifying models that had not yet been rigorously evaluated to examine impacts on children’s outcomes, we found primarily implementation and descriptive research on these models. As reported in the model summaries, eight of the models had research studies (Table III.1). Those with research often had only one study. The studies included implementation studies, descriptive outcome studies measuring interim and child outcomes, and, to a lesser extent, impact studies measuring interim outcomes. Two models had impact studies examining child outcomes that were underway at the time the scan was conducted.

None of the curricula models had research on implementation or outcomes. The preschool versions of HighScope and the Creative Curriculum have been rigorously evaluated, but not the infant and toddler curricula. Both AEPS and HELP had extensive research on the psychometric properties of the assessment tools that accompany the curriculum materials but not the curricula itself. Although the curricula had not been evaluated, the model developers note that the models were developed based on existing research evidence, including research on infant/toddler development, attachment, and brain development.

Despite the existence of some research on the compelling models, all could benefit from further development to specify how they should be implemented and how staff should be trained and supported to carry out these models with fidelity. Developing and testing the effectiveness of program models requires a range of research, including implementation, outcome, and impact studies. The type of research needed depends on the stage of each model’s development. Implementation studies focus on assessing the feasibility of implementation and refining model specification, developing fidelity standards and measures, and assessing how the model may need to be adapted for different settings and target populations. Descriptive outcome studies can provide suggestive evidence about whether a model is producing expected outcomes and warrants more rigorous testing through an impact study.

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31 We only report findings from studies that focused on infants and toddlers and their caregivers. Specifically, we report findings on children’s outcomes for infants and toddlers, or interim outcomes for infant and toddler caregivers or settings where infants and toddlers received care. We include findings from implementation studies as long as they reported on care settings for infants and toddlers.
Rapid cycle evaluations can serve a cost-effective strategy for guiding decision making (Cody and Asher 2014; Metz et al. 2015). By leveraging data available in administrative records, model developers can test interventions more quickly than evaluations that require collecting data. Because the outcomes need to be observable in a short period of time, it is most useful in looking at outputs (such as the number of coaching sessions completed) and impacts on intermediate outcomes (such as caregiver knowledge). Rapid cycle evaluations can be particularly useful in testing potential solutions to implementation difficulties. For example, this type of evaluation could be used to test interventions for increasing ongoing attendance rates of informal caregivers participating in ELR (such as altering the time of day events are offered, offering transportation, or using text message reminders); ELR administrative data could serve as a data source for tracking whether the interventions led to increased attendance.

Finally, impact studies can provide evidence as to whether a given early learning model or intervention is responsible for changes seen in measured child outcomes. For a complete picture, researchers can couple impact studies with implementation studies that measure fidelity. Measuring fidelity helps researchers interpret the results of impact studies; for example, it can help them determine whether a model seems to be ineffective because it was not implemented correctly or, conversely, whether findings should be attributable to the model because it was implemented according to the developer’s specifications (Knoche et al. 2010). Together, findings from across the spectrum of research can provide information about what was implemented and whether it worked.

Since the process of developing and testing models requires time and resources, several innovative strategies, including rapid cycle evaluations, should be considered for supporting model development. Model developers and other decision-makers may also be able to collaborate with networks of researchers to implement these types of evaluations. For example, the Network for Infant/Toddler Researchers (NITR) sponsored by OPRE, collaborative innovation and improvement networks (CoIINs), and Early Learning Labs could serve as forums for supporting development of ECE models for infants and toddlers. These networks bring together practitioners, researchers, and experts for mutual learning. Early Learning Labs aim to accelerate experimentation and development of scalable early learning interventions.
### Table III.1. Overview of research on compelling models, by study type

<table>
<thead>
<tr>
<th>Model</th>
<th>Implementation study</th>
<th>Descriptive study: child outcomes</th>
<th>Descriptive study: interim outcomes&lt;sup&gt;a&lt;/sup&gt;</th>
<th>Impact study: interim outcomes</th>
<th>Impact study underway: child outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Early Childhood Consultation Partnership (ECCP)</td>
<td>✓</td>
<td></td>
<td></td>
<td>✓&lt;sup&gt;c&lt;/sup&gt;</td>
<td></td>
</tr>
<tr>
<td>Early Learning Readiness (ELR) Program</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Educare</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
<td>✓&lt;sup&gt;c&lt;/sup&gt;</td>
</tr>
<tr>
<td>Expanding Quality in Infant Toddler Care (EQIT) course and EQ RELATE Model of Coaching</td>
<td>✓</td>
<td>✓</td>
<td>✓&lt;sup&gt;d&lt;/sup&gt;</td>
<td></td>
<td></td>
</tr>
<tr>
<td>First Beginnings&lt;sup&gt;e&lt;/sup&gt;</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Infant Caregiver Mentoring Project&lt;sup&gt;e&lt;/sup&gt;</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Seeds to Success&lt;sup&gt;e&lt;/sup&gt;</td>
<td>✓</td>
<td>✓&lt;sup&gt;g&lt;/sup&gt;</td>
<td>✓&lt;sup&gt;g&lt;/sup&gt;</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Smart Support</td>
<td>✓&lt;sup&gt;f&lt;/sup&gt;</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<sup>a</sup>Interim outcomes are those other than child outcomes that are thought to be related to child development. For LITES, this included the following domains: global ECE quality, structural features of care, caregiver-child interaction, and caregiver knowledge of child development.

<sup>b</sup>Results from a pilot impact evaluation of ECCP became publically available in December 2014, after analyses for the LITES systematic review and compelling models profiles were complete.

<sup>c</sup>Data collection is in progress for the first phase of an impact study on Educare, which follows children through age 3; the youngest children in the study turn 3 in September 2015.

<sup>d</sup>The study of EQIT included comparison groups of convenience. Within the EQIT intervention group, participants were randomly assigned to receive different amounts of coaching.

<sup>e</sup>First Beginnings and the Infant Caregiver Mentoring Project are not currently active. After the Seeds to Success demonstration period concluded, it was used to develop a new system called Early Achievers, which is currently in operation.

<sup>f</sup>The study of the Infant Caregiver Mentoring Project used a randomized design, but reported analyses of pre-post differences within groups.

<sup>g</sup>Smart Support presented study results in infographic provided by the developer rather than a research report.
A consideration about the implementation of the compelling models, particularly curriculum models, is that many out-of-home early learning settings rely on multiple models or select specific practices from models to meet program needs. In a survey of National Association for the Education of Young Children (NAEYC) members, 46 percent of respondents reported using various curriculum models but did not identify a principal model. Different models may serve different purposes in a setting. Practitioners may also rely on multiple models in an effort to innovate and improve services. In addition, the prevalence of reliance on multiple models may point to the need for more multicomponent models that provide all the components needed in an out-of-home early learning setting for infants and toddlers. As indicated by Epstein et al. (1996), practitioners may feel the need to combine models to provide a complete package of professional development support for staff, curricula, and other early learning supports for children and families. In contrast, multicomponent models include all of these program dimensions.

Our scan of the field yielded two compelling multicomponent models (Educare and the Early Learning Readiness Program for Informal Family, Friend, and Neighbor Caregivers [ELR]). The other models were professional development interventions or curricula. This finding may reflect a current policy trend toward supporting out-of-home care early learning initiatives focused on professional development or quality improvement in existing settings, such as through Quality Rating and Improvement Systems (QRIS), rather than multicomponent models. This investment may reflect the reality that, since welfare reform, most low-income infants and toddlers are already in out-of-home care while their parents work and current policies support low-income working parents by providing vouchers that they can use at any ECE setting (as opposed to directing families into specific ECE models). As a result, the field is focusing on improving the settings in which children already receive care. Moreover, developing and testing a multicomponent model is expensive; finding the resources to do so may not be feasible for most model developers. In the remainder of this chapter, we describe the spectrum of research needed to develop and test the models.

A. Model specification

Well-specified models have well-developed logic models in which services are closely linked with specific desired outcomes. They also have written materials and other supports available to guide implementation. The level of specification in the compelling models we profiled in this report varied, both across models and across implementation components (Table III.2). All models specified target outcomes and target populations. Most also had available implementation guides, training materials, and qualified trainers. Almost half of the models had specific training requirements for staff. For example, Smart Support has an implementation manual and a logic model. The implementation manual describes in detail the step-by-step process for providing consultation, to ensure consistent service delivery and fidelity to the Smart Support model. Smart Support consultants receive pre-service and in-service training, as well as ongoing supervision, to assist their work and fidelity to the model. In addition to these implementation supports, ECCP also uses a centralized information system for program operations, data collection, and reporting. The data from this system are used to create plans for delivering services, for quality assurance, and to promote fidelity to the model.

Even the models with written materials to support implementation could benefit from additional research to understand the mechanisms through which the models improve child or
caregiver outcomes, identify the components that require greater definition or structure to have a strong influence on participants, and identify different outcomes that might warrant further examination. This research could be used to develop detailed logic models before pilot tests or studies of models are launched, and to refine them as development proceeds.

**Table III.2. Overview of documented implementation components**

<table>
<thead>
<tr>
<th>Implementation component</th>
<th>Number of compelling models</th>
</tr>
</thead>
<tbody>
<tr>
<td>The model developer has specified the following:</td>
<td></td>
</tr>
<tr>
<td>Target outcomes</td>
<td>13</td>
</tr>
<tr>
<td>Target population</td>
<td>13</td>
</tr>
<tr>
<td>Dosage of services</td>
<td>8</td>
</tr>
<tr>
<td>Program length</td>
<td>9</td>
</tr>
<tr>
<td>Staff education requirements</td>
<td>3</td>
</tr>
<tr>
<td>Staff training requirements</td>
<td>6</td>
</tr>
<tr>
<td>Supports for implementation</td>
<td>13</td>
</tr>
<tr>
<td>Implementation/operation manuals</td>
<td>11</td>
</tr>
<tr>
<td>Training materials</td>
<td>12</td>
</tr>
<tr>
<td>Qualified trainers</td>
<td>12</td>
</tr>
<tr>
<td>Fidelity standards</td>
<td>6</td>
</tr>
<tr>
<td>Systems for monitoring fidelity</td>
<td>6</td>
</tr>
</tbody>
</table>

**B. Implementation research**

Implementation studies are informative throughout the development of a model, but particularly so in the early stages. These studies explore the feasibility of implementing models and model components and how models are implemented in the field. For example, implementation studies can explore the use of multiple models simultaneously in ECE settings and differences in implementation of the same model depending on how they select and combine model components. In addition, implementation research can inform the development of fidelity standards and measures for assessing fidelity to track the degree to which components are implemented. To study implementation, researchers rely on various methodologies depending on the goals of the study, such as qualitative case studies to learn about how models are implemented; planned variation studies that examine how outcomes vary depending on the model components implemented; or rapid cycle evaluations that test the impacts of changes to implementation and that can inform continuous quality improvement.

Of the 13 compelling models profiled in this report, 4 had studies examining implementation (ECCP, ELR, Smart Support, and Seeds to Success; Table III.1). These studies reported on how services were implemented, teacher and caregiver satisfaction with the services, and barriers to implementation. Understanding the feasibility of implementation (including how services were implemented, the challenges of model implementation, and whether and how those challenges can be met) can help developers to better specify and refine model implementation. For example, a component of the Seeds to Success model includes funds for professional development. The study identified several barriers that made feasibly implementing this component difficult, including (1) limited availability of trainings and classes, particularly near their places of
employment or homes; (2) lack of trainings and classes that provided new or relevant information; and (3) low perceived “payoffs” to professional development, because salaries were unlikely to increase as a result of completion of professional development (Boller et al. 2010). Understanding these barriers can inform refinements to the model.

In addition, implementation research can inform the development of fidelity standards and test measures of fidelity that can be used for ongoing monitoring and program improvement. Measuring fidelity can also help researchers interpret the results of impact studies; for example, it can help them determine whether a model seems to be ineffective because it was not implemented correctly or, conversely, whether findings should be attributable to the model because it was implemented according to the developer’s specifications (Knoche et al. 2010). When models are specified and the content, intensity, duration, and approach to delivery of services have been defined, research is needed to develop standards for levels of fidelity that must be achieved to produce desired outcomes. For example, fidelity standards could include the minimum amount and quality of services needed to implement with fidelity, the time and training needed for out-of-home caregivers to achieve fidelity, and the support required to maintain it. About 40 percent of the compelling models specified fidelity standards or had systems for monitoring fidelity (see Table III.2). The studies of ELR and ECCP used administrative data to describe implementation fidelity; these studies did not, however, explore the levels of fidelity needed to produce desired outcomes (YMCA of the USA 2014; Fink and Wakai 2003).

C. Outcome and impact studies

Outcome studies can assess the degree to which a model seems on track to achieve its intended outcomes. Outcome study methods fall along a spectrum that can be thought of as progressing from descriptive, to suggestive, to conclusive in assessing the influence of the model on the desired outcomes. The methods are all useful but address different purposes and research questions. Because causal impact studies require substantial time and resources, it may be prudent to conduct descriptive outcome or correlational studies first. If results are potentially positive, an impact study may be warranted. Only an impact study can conclusively attribute positive findings to the program model.

Descriptive outcome studies. These studies examine the changes in outcomes only for participants in the model; there is no comparison group. Such studies are useful as performance measures for monitoring to ensure that a model is “on track” to achieve goals but do not allow researchers to make causal inferences that the program model caused the observed effect. Two of the compelling models had a descriptive study measuring children’s outcomes (Educare and Smart Support), and four models had descriptive studies of interim outcomes (ELR, Educare, First Beginnings, and Smart Support; see Table III.1).

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32 Planned variation studies can provide useful information to inform the development of fidelity standards by testing which model components (or combinations of components) are most effective for delivering specific content or by testing the relative impact of different conditions within a model (such as levels of staff training or dosage). To test different components, caregivers could be randomly assigned to variations of a model with different levels of training or coaching for staff. Such a study could shed light on the qualifications or levels of training and support needed to achieve desired outcomes.
The descriptive studies of both Educare and Smart Support showed potentially positive findings on children’s outcomes (Yazejian and Bryant 2012; Southwest Human Development and Indigo Cultural Center 2015). For example, the study of Educare found that more years of program attendance was associated with better school readiness and vocabulary skills. Similarly, the descriptive studies of interim outcomes pointed to the potential of the models to improve these outcomes. The studies of both ELR and Smart Support suggested the potential of the models to improve caregiver/consultant knowledge (YMCA of the USA 2014; Southwest Human Development and Indigo Cultural Center 2015). The study of Educare found higher levels of classroom quality as compared to national norms and the study of First Beginnings found improvements on pre- and post-measures of classroom quality (Yazejian and Bryant 2012; Campbell et al. 2005).

Causal impact studies. A conclusive test of effectiveness determines whether the model caused the differences between expected outcomes for the intervention and comparison group. Impact studies using well-executed designs such as RCTs, matched comparison group designs, regression discontinuity designs, and single case designs are needed to attribute findings to the model. To determine this causality, a study needs to examine the outcomes relative to what would have happened without the model. These studies rely on a comparison group that does not participate in the model but is otherwise similar to the group that does participate. When intervention and comparison groups are similar, the outcomes for both groups can be compared, and any differences can be attributed to the model.

Among the research on the compelling models, we identified three RCTs measuring interim outcomes (EQIT, Infant Caregiver Mentoring Project, and Seeds to Success). Across the studies, all three found higher observed quality in the intervention group versus the comparison group (Moreno et al. 2015; Fiene 2002; Boller et al. 2010). These findings indicate these caregiver professional development models are good candidates for impact studies examining whether the models can improve child outcomes. At the time this report was written, impact studies examining child outcomes were underway for two models: ECCP and Educare. Because the results were not yet available, however, these two models were not included in the LITES systematic review. The pilot study of ECCP, which was available after the completion of the LITES systematic review, found suggestive evidence of decreased hyperactivity for toddlers (Gilliam 2014). However, the small sample size may have impeded the authors’ ability to detect a statistically significant impact. These findings warrant further investigation through rigorous research.

D. Conclusion

This report profiled 13 models that are viewed by the ECE field as having potential to promote infant and toddler early learning in out-of-home settings, but have not yet been rigorously evaluated. The models include two that provide direct early learning services to infants and toddlers; six focused primarily on working with caregivers through coaching, modeling, and/or collaborative consultation to help them support children’s early learning; and an additional five models are curricula implemented in programs for infants and toddlers. Over half of the models are aimed at supporting children’s development across domains, including language, cognition, or social emotional/behavioral development. The models tend to target children and caregivers in a range of out-of-home ECE settings including both center-based and
home-based settings. Eight of the 13 models had at least some research, usually a single implementation or descriptive study. None of the curricula models had existing research. The three models with impact studies of interim outcomes were all professional development models; the findings pointed to the potential of these models to improve observed quality and increase caregiver knowledge and skills.

Although many of the models have begun the process of building a research base, additional research on out-of-home ECE models for infants and toddlers is essential for moving the field forward. Two models—Educare and ECCP—are currently the focus of impact studies. As a follow-up to these studies, models can also be tested with different subgroups of caregivers (for example, family child care providers and center-based providers) or children (for example, dual language learners and monolingual English speakers) to identify the groups for which particular strategies are most effective. Additional compelling models that are well-specified and have some existing research evidence, such as EQIT, Infant Caregiver Mentoring Project, Smart Support, and Seeds to Success, might be ready for impact studies that examine their impact on children’s outcomes. Others, including the five curriculum models, might require a full spectrum of research to test the feasibility of staff training and implementation procedures, develop standards for high-fidelity implementation and measures to monitor fidelity, and assess whether the models show potential for producing intended outcomes.
REFERENCES


Gilliam, W.S. “Early Childhood Consultation Partnership: Results Across Three Statewide Random-Controlled Evaluations.” New Haven, CT: Yale School of Medicine, Child Study Center, 2014.
REFERENCES


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APPENDIX A
IDENTIFYING COMPELLING MODELS
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# Table A.1. Electronic mailing lists for the LITES call for nominations

<table>
<thead>
<tr>
<th>Group</th>
<th>Email or contact information</th>
</tr>
</thead>
<tbody>
<tr>
<td>American Academy of Pediatrics</td>
<td><a href="mailto:kidsdocs@aap.org">kidsdocs@aap.org</a></td>
</tr>
<tr>
<td>American Education Research Association</td>
<td><a href="mailto:aeainfo@vanderbilt.edu">aeainfo@vanderbilt.edu</a></td>
</tr>
<tr>
<td>American Evaluation Association</td>
<td><a href="mailto:info@eval.org">info@eval.org</a></td>
</tr>
<tr>
<td>American Medical Association</td>
<td><a href="mailto:mediarelations@jama-archives.org">mediarelations@jama-archives.org</a></td>
</tr>
<tr>
<td>American Professional Society on the Abuse of Children</td>
<td><a href="mailto:apsac@apsac.org">apsac@apsac.org</a></td>
</tr>
<tr>
<td>American Psychiatric Nurses Association</td>
<td><a href="mailto:tlantrip@apna.org">tlantrip@apna.org</a></td>
</tr>
<tr>
<td>American Public Health Association</td>
<td><a href="mailto:public.affairs@apa.org">public.affairs@apa.org</a></td>
</tr>
<tr>
<td>American Sociological Association</td>
<td><a href="mailto:publications@asanef.org">publications@asanef.org</a></td>
</tr>
<tr>
<td>Association for Psychological Science</td>
<td><a href="mailto:amikulak@psychologicalscience.org">amikulak@psychologicalscience.org</a></td>
</tr>
<tr>
<td>Association for Public Policy Analysis and Management</td>
<td><a href="mailto:appam-i@list.s-3.com">appam-i@list.s-3.com</a></td>
</tr>
<tr>
<td>Association of Maternal and Child Health Programs</td>
<td><a href="mailto:info@amchp.org">info@amchp.org</a></td>
</tr>
<tr>
<td>Center for Law and Social Policy</td>
<td><a href="mailto:jrobinson@clasp.org">jrobinson@clasp.org</a></td>
</tr>
<tr>
<td>Child Care and Early Education Research Connections</td>
<td><a href="mailto:contact@childcareresearch.org">contact@childcareresearch.org</a></td>
</tr>
<tr>
<td>Child Maltreatment Researchers Listserv</td>
<td><a href="mailto:child-maltreatment-research-i@cornell.edu">child-maltreatment-research-i@cornell.edu</a></td>
</tr>
<tr>
<td>Child Welfare Information Gateway</td>
<td><a href="mailto:info@childwelfare.gov">info@childwelfare.gov</a></td>
</tr>
<tr>
<td>Coalition for Evidence-Based Policy</td>
<td><a href="mailto:danderson@coalition4evidence.org">danderson@coalition4evidence.org</a></td>
</tr>
<tr>
<td>Collaborative for Understanding the Pedagogy of Infant/Toddler</td>
<td><a href="mailto:vallotto@msu.edu">vallotto@msu.edu</a></td>
</tr>
<tr>
<td>Development</td>
<td></td>
</tr>
<tr>
<td>Early Head Start Research Consortium</td>
<td><a href="mailto:ehs_research@listserv.icfi.com">ehs_research@listserv.icfi.com</a></td>
</tr>
<tr>
<td>Evidence Based Home Visitation Programs</td>
<td><a href="mailto:ebhv@listserv.icfi.com">ebhv@listserv.icfi.com</a></td>
</tr>
<tr>
<td>Federal Inter-Agency Workgroup on Child Abuse &amp; Neglect</td>
<td><a href="mailto:catherine.nolan@acf.hhs.gov">catherine.nolan@acf.hhs.gov</a></td>
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<tr>
<td>FRIENDS Listserv for Community Based Child Abuse Prevention</td>
<td><a href="mailto:friendsnrc@lists.friendsnrc.org">friendsnrc@lists.friendsnrc.org</a></td>
</tr>
<tr>
<td>Grantees and Interested Community Members</td>
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<tr>
<td>Foundation for Child Development</td>
<td><a href="mailto:info@fcd-us.org">info@fcd-us.org</a></td>
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<tr>
<td>Future of Children</td>
<td><a href="mailto:foc@princeton.edu">foc@princeton.edu</a></td>
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<tr>
<td>Harvard’s Center on the Developing Child</td>
<td><a href="mailto:developingchild@harvard.edu">developingchild@harvard.edu</a></td>
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<td>Health Resources and Services Administration Traumatic Brain Injury</td>
<td><a href="mailto:tbiserv@list.nih.gov">tbiserv@list.nih.gov</a></td>
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<tr>
<td>Technical Assistance Center Listserv</td>
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<tr>
<td>Healthy Start Eval Listserv (NIH)</td>
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<td>International Society for the Prevention of Child Abuse and Neglect</td>
<td><a href="mailto:ispcan@ispcan.org">ispcan@ispcan.org</a></td>
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<td>The International Society on Infant Studies</td>
<td><a href="mailto:lewkowic@fau.edu">lewkowic@fau.edu</a></td>
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<td><a href="mailto:eccs@lists.ucdenver.edu">eccs@lists.ucdenver.edu</a></td>
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<td><a href="mailto:membership@naeyc.org">membership@naeyc.org</a></td>
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<tr>
<td>National Association for Welfare Research and Statistics</td>
<td><a href="mailto:NAWRS2013@gmail.com">NAWRS2013@gmail.com</a></td>
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<td>National Association of Social Workers</td>
<td><a href="mailto:membership@naswdc.org">membership@naswdc.org</a></td>
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<tr>
<td>National Council on Family Relations</td>
<td><a href="mailto:info@ncfr.org">info@ncfr.org</a></td>
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<tr>
<td>Network of Infant/Toddler Researchers</td>
<td><a href="mailto:nitr@lists.icfwebservices.com">nitr@lists.icfwebservices.com</a></td>
</tr>
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<td>Partners in Maternal and Child Health Safety Net Listserv</td>
<td>Members contacted directly</td>
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<tr>
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<td><a href="mailto:info@pewtrusts.org">info@pewtrusts.org</a></td>
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<tr>
<td>Prevent Child Abuse America</td>
<td><a href="mailto:mailbox@preventchildabuse.org">mailbox@preventchildabuse.org</a></td>
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<td><a href="mailto:info@srcd.org">info@srcd.org</a></td>
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<tr>
<td>Society of Pediatric Nurses</td>
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<td>Zero to Three</td>
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## Table A.2. Models considered for inclusion

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<tr>
<td>Assessment, Evaluation and Programming System</td>
<td>Data on curricula&lt;sup&gt;a&lt;/sup&gt;</td>
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<td>Ball State University Child Study Center</td>
<td>Call for nominations</td>
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</tr>
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<td>The Creative Curriculum for Family Child Care</td>
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<td>The Creative Curriculum for Infants, Toddlers &amp; Twos</td>
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<tr>
<td>Cuyahoga County Early Childhood Initiative</td>
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<td>Early Childhood Consultation Partnership</td>
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<td>Educare</td>
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<td>Screened in</td>
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<td>Emotional Beginnings</td>
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<td>Screened in</td>
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<td>Screened in</td>
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<td>First Beginnings (Philadelphia Inclusion Network)</td>
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<td>HighScope Infant-Toddler Curriculum</td>
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<td>Piper Child Development Center for Family Studies and Child Development at Baylor University</td>
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<td>Promethean Foundation (Pro-Kids)</td>
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<td>Responsive Infant/Toddler Practice within a Suite of Inquiry</td>
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<td>Primarily targets parents</td>
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<td>Baby Signs</td>
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<td>Targets parents</td>
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<td>Beautiful Beginnings: A Developmental Curriculum for Infants and Toddlers</td>
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<td>Beyond the Delivery/Infant Massage</td>
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<tr>
<td>Building Early Emotion Skills Curriculum</td>
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<td>Born to Learn/Parents as Teachers</td>
<td>Data on curricula</td>
<td>Home visiting curriculum</td>
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<td>Celebrating Families! (0-3)</td>
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<td>Targets parents</td>
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<td>-------------------------------------------</td>
<td>-------------------------------</td>
<td>--------------------------------------------------------------------------------------------</td>
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<td>Continuity of care</td>
<td>Call for nominations</td>
<td>Theoretical approach or general practice; not a replicable model without further specification</td>
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<td>Developmental Learning Materials</td>
<td>Data on curricula</td>
<td>Infant/toddler curriculum not available; pre-K only</td>
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<td>Domains Based Curriculum</td>
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<td>Early Childhood Research and Intervention Program</td>
<td>Screened out of systematic review</td>
<td>Targets children with medical and developmental disabilities</td>
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<td>Early Learning Accomplishments Profile</td>
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<td>Assessment only</td>
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<tr>
<td>Games to Play with Toddlers</td>
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<td>Limited documentation available; handbook of activities only</td>
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<tr>
<td>Growing Great Kids In Center-Based and Family Child Care Professional Development Program</td>
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<td>High Reach For Infants/High Reach For Toddlers and Twos</td>
<td>Data on curricula</td>
<td>Did not meet 5 percent threshold</td>
</tr>
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<td>Infant Toddler Project</td>
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<td>Innovations</td>
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<td>Infant/toddler curriculum not available; preschool only</td>
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<td>Just in Time Parenting</td>
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</tr>
<tr>
<td>Learning Activities for Infants</td>
<td>Data on curricula</td>
<td>No information available</td>
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<td>LINKAGES: Building Strong Connections</td>
<td>Call for nominations</td>
<td>Targets parents</td>
</tr>
<tr>
<td>Montessori</td>
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<td>Theoretical approach or general practice; not a replicable model without further specification</td>
</tr>
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<td>Ones and Twos</td>
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<td>Partners as Primary Caregivers</td>
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<td>Partners for a Healthy Baby (Florida State University)</td>
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<td>Home visiting curriculum</td>
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<td>Playtime Learning Games for Young Children</td>
<td>Data on curricula</td>
<td>Limited documentation available; handbook of activities only</td>
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<td>Program for Infant/Toddler Care</td>
<td>Data on curricula</td>
<td>Rigorous research examining children’s outcomes exists, therefore included in systematic review</td>
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<td>Reggio Emilia</td>
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<td>Theoretical approach or general practice; not a replicable model without further specification</td>
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<tr>
<td>Special Care Nursery</td>
<td>Call for nominations</td>
<td>Targets children with medical and developmental disabilities</td>
</tr>
<tr>
<td>Spilstead Model</td>
<td>Screened out of systematic review</td>
<td>Early intervention program, targets children with developmental needs</td>
</tr>
<tr>
<td>Talking to Your Baby</td>
<td>Data on curricula</td>
<td>Parenting curriculum</td>
</tr>
<tr>
<td>Tools of the Mind</td>
<td>Expert recommendation</td>
<td>Infant/toddler curriculum not available; preschool and older only</td>
</tr>
</tbody>
</table>
APPENDIX A

<table>
<thead>
<tr>
<th>Model</th>
<th>Source</th>
<th>Reason for screening out</th>
</tr>
</thead>
<tbody>
<tr>
<td>Toronto First Duty</td>
<td>Screened out of systematic review</td>
<td>Does not serve infants and toddlers, only older children</td>
</tr>
<tr>
<td>University-Housed Half Day Care Model</td>
<td>ASPE recommendations</td>
<td>Model no longer implemented and no information available</td>
</tr>
</tbody>
</table>

ASPE = Office of the Assistant Secretary for Planning and Evaluation.

*aTo identify commonly used curricula, we examined the Early Head Start Family and Child Experiences Survey (known as Baby FACES) and the Head Start Program Information Report (PIR).

*bUsing information from Baby FACES and the PIR, we screened out curricula used by less than 5 percent of Early Head Start programs.
APPENDIX B

OVERVIEW OF COMPELLING MODELS
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### Table B.1. Overview of compelling models

<table>
<thead>
<tr>
<th>Model name</th>
<th>Overview and key components</th>
<th>Targeted outcomes</th>
<th>Target population</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Models that provide direct early learning services to children</strong></td>
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</tr>
<tr>
<td>Early Learning Readiness (ELR) Program for Informal Family, Friend, and Neighbor Caregivers</td>
<td>ELR promotes early learning for children receiving care in informal child care settings, and supports their informal caregivers. These children and their caregivers participate together in the program through sessions that are facilitated and held in a group setting. A typical session consists of the following: (1) an opening circle time where the children and caregivers read stories and sing songs together; (2) time to explore a range of activities at 13 interest centers; and (3) a closing circle to review the day’s learning. During the sessions, facilitators talk with caregivers about the interest centers, how the activities encourage learning in children, and the role caregivers can play in promoting learning and development using the activities. In addition, activities at each center include written guidance for caregivers that list learning concepts, vocabulary words, and questions caregivers can ask the children. Session content features monthly, culturally sensitive themes and is designed to align with local standards for school readiness.</td>
<td>Child development and school readiness, both directly with children and by increasing the skills and knowledge of their caregivers</td>
<td>Low-income children from birth to age 5 who receive informal care from family members, friends, and neighbors, as well as their informal caregivers</td>
</tr>
<tr>
<td>Educare</td>
<td>The Educare Learning Network is a national network of schools that provide full-day, full-year early care and education to low-income children from birth to age 5. The Educare model contains several core features, which are grouped into four domains: (1) data utilization, (2) high quality teaching practices, (3) embedded professional development, and (4) intensive family engagement. Under a system of continuity of care, children stay with the same teaching team and cohort of children from program entry until age 3, and then stay with a second team until they transition out of Educare and into elementary school at age 5. Within each teaching team, every child has a primary caregiver, and each classroom has three adults with eight infants and toddlers. Groups of staff from up to four classrooms are supervised by master teachers who provide mentoring, coaching, and support to classroom teachers. Local Educare sites choose their own curriculum, which must be research-based and focus on pre-literacy, early math, and social-emotional skills, and integrate development of these skills with arts activities. Educare schools also offer on-site family engagement services, provided by full-time family support supervisors and specialists, to promote parent involvement. These staff also coordinate referrals for parents to other services.</td>
<td>Language and literacy, social-emotional development, early math concepts, problem-solving, and motor development for children; parents’ abilities to support their child’s learning and promote family well-being after they leave Educare</td>
<td>At-risk children from birth to age 5 and their families; families must meet Head Start income requirements to qualify</td>
</tr>
<tr>
<td><strong>Models that primarily focus on professional development for caregivers</strong></td>
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<tr>
<td>Early Childhood Consultation Partnership (ECCP)</td>
<td>ECCP is an early childhood mental health consultation program that operates statewide in Connecticut. The program is designed to build the capacity of caregivers (primarily non-parental caregivers such as center-based educators and family child care providers, but in some cases parental caregivers as well) by offering support, education, and on-site consultation to help them meet the social-emotional needs of children in their care. It is designed to address a continuum of care that includes promotion, prevention, and early intervention.</td>
<td>Outcomes for children, including social, emotional, and mental wellness, and preventing at-risk children from developing mental health disorders or being</td>
<td>Children from birth to age 5 and their non-parental caregivers in early care and education settings, which include both center-based care and family child care homes; in some cases,</td>
</tr>
<tr>
<td>Model name</td>
<td>Overview and key components</td>
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<td>Target population</td>
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<tr>
<td>ECCP</td>
<td>Services provided by ECCP consultants range in scope and can consist of (1) child-specific services, which help non-parental caregivers and family members meet the needs of a particular child; (2) core classroom services, which help a teacher or caregiver meet the needs of their classroom (and include some child-specific services); or (3) intensive center services, which help center staff build capacity to address the needs of the full center (and may include child-specific and classroom services).</td>
<td>suspended or expelled</td>
<td>children’s families, including services within children’s homes; ECCP aims to support children who are at risk of developing a mental health disorder or of being suspended or expelled</td>
</tr>
<tr>
<td>Expanding Quality in Infant Toddler Care (EQIT) course and EQ RELATE Model of Coaching</td>
<td>The EQIT course provides training for caregivers of infants and toddlers to improve their knowledge and skills. Course content covers the importance of brain development in the first three years of life; the social-emotional, cognitive, language, and physical development of infants and toddlers; relationship-based care and relationship-based approaches to guiding children’s behavior; partnerships with families; quality curriculum and environments; and health, safety, and nutrition. Completion of the course meets some state licensing requirements, and, when possible, partnerships with local community colleges allow for course participation to result in college credit. These partnerships are also used to encourage participants to consider additional formal coursework. Class sizes are intended to be 20 or fewer caregivers. An orientation may be held before the course begins to introduce instructors, provide an overview of the course, set course expectations, and provide additional information. Participants are also offered the option of receiving on-site coaching through the EQ RELATE coaching model to supplement the course. The coaching supports participants in reflecting on the skills and knowledge learned in the course and integrating this information into the care they provide to their infants and toddlers.</td>
<td>Knowledge and skills of caregivers in multiple areas, including supporting children’s social-emotional, cognitive, and physical development</td>
<td>Colorado caregivers or other individuals who work with infants and toddlers in group settings, whether in center-based care, family child care, or another setting</td>
</tr>
<tr>
<td>First Beginnings</td>
<td>First Beginnings is a professional development program for caregivers of infants and toddlers in out-of-home settings (centers and family child care homes) that features both training and on-site consultation designed to increase the quality of care children received. First Beginnings consists of four components: 1. Participants take a group training class. Topics include caregiver-child relationships, strategies for promoting learning and development, inclusion and diversity, and working with families. 2. Outside of class time, participants complete a project that involves reflecting on and writing about an infant or toddler in their care identified by them as having a special need. 3. On-site observation visits are conducted before and after the program to collect measures of the quality of the participants’ classroom environments and their interactions with the children in their care. 4. Participants receive on-site consultation visits. Consultation strategies include providing/reviewing resources or materials, brainstorming, modeling, and discussion.</td>
<td>Program quality</td>
<td>Caregivers of infants and toddlers (birth to age 3) in centers and family child care homes</td>
</tr>
<tr>
<td>Infant Caregiver Mentoring Project</td>
<td>The Infant Caregiver Mentoring Project is designed to improve the quality of infant and toddler child care programs through the use of mentoring. Participants in the project are paired with an experienced early childhood professional who...</td>
<td>Overall quality of the child care environment, especially the quality of Pennsylvania caregivers from center-based child care programs serving...</td>
<td>Pennsylvania caregivers from center-based child care programs serving...</td>
</tr>
</tbody>
</table>
Seeds to Success

Seeds to Success is a coaching model for providing quality improvement services within a pilot child care quality rating and improvement system. It supports licensed family child care providers, center-based teachers, and child care center directors in improving: (1) the quality of early care and education and (2) staff access to professional development and training. The coaching model, the Consultative Coaching Program for Early Learning Professionals, was developed in 2008 by Thrive by Five Washington, Washington State’s public-private partnership for early learning. The goal of the Consultative Coaching Program is to train coaches to develop a trusting relationship with early learning professionals so that they can help early learning professionals reflect on their practice (1) in the classroom or in their business and (2) during interactions with the other providers in that setting, with families, and with the children in their care. The Seeds to Success coaches aim to help the professionals stay motivated to attain their quality improvement goals and help establish skills and behaviors that support continuous quality improvement. Providers and coaches develop quality improvement plans that are used to guide the coaching sessions. The plans are based on results of a baseline observation of setting quality.

Smart Support

Smart Support is Arizona’s system of early childhood mental health consultation. It partners mental health consultants with early care and education providers to promote the social and emotional development of the children in their care, and to help them respond to children with behavioral challenges. A consultant first meets with a provider to explain the consultation services, confirm these are appropriate for the provider’s needs, and verify that the provider remains interested in receiving these services. If so, the consultant works with the provider to develop an individualized plan that describes how services will be provided. Three types of consultation can be provided in different combinations depending on provider needs and preferences: (1) program consultation focuses on the provider’s entire setting; (2) classroom consultation works with a teacher to improve his or her skills or outcomes in the classroom; and (3) child-centered consultation involves helping staff and parents develop a plan to support care for a child exhibiting difficult behaviors. Services provided by consultants may also include training as well as referrals to other services and resources.

Curricula models

<p>| Assessment, Evaluation, and Programming | AEPS is designed to support caregivers in matching a child’s goals and activities with activity-based intervention strategies based on the child’s age and current level of development. These strategies involve working on goals and objectives | Fine motor, gross motor, adaptive, cognitive, social-communication, and social skills | Professionals (including early childhood educators in general, as well as special education teachers,) |</p>
<table>
<thead>
<tr>
<th>Model name</th>
<th>Overview and key components</th>
<th>Targeted outcomes</th>
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</thead>
<tbody>
<tr>
<td>System (AEPS), Second Edition, Curriculum for Birth to Three Years</td>
<td>within the children’s routine (for example, mealtimes, bathing, and dressing), planned activities (for example, activities organized by an adult, such as painting), and spontaneous activities that capitalize on children’s daily interactions with their social and physical environments to facilitate skill development. The curriculum is linked to the AEPS Test, an assessment designed to help teachers select and evaluate goals and objectives that are most appropriate for each individual child in key developmental areas. Overall, AEPS includes two sets of assessment and curriculum materials, one for children birth through age 3 and one for children age 3 through 6. The system is supported by a web-based data management system known as AEPSi.</td>
<td>early interventionists, family service coordinators, administrators, physical therapists, speech-language pathologists, and occupational therapists working with children birth to age 3. Specifically developed for use with children who have disabilities or are at risk for developmental delays, but can be used with all children.</td>
<td></td>
</tr>
<tr>
<td>The Creative Curriculum for Family Child Care, Second Edition</td>
<td>The Creative Curriculum for Family Child Care, Second Edition, is a curriculum designed to help family child care providers: (1) set up the learning environment; (2) plan developmentally appropriate routines and activities for every day of the week; (3) promote children’s learning and development in the areas of social-emotional, physical, language, cognitive, literacy, mathematics, science and technology, social studies, the arts, and English-language acquisition; and (4) build partnerships with parents. To make it easier for caregivers to implement activities, the curriculum also includes 68 Creative Curriculum LearningGames offering suggestions for helping families and caregivers interact with children, a list of necessary materials, and ways to adapt the activities to children’s ability levels; a DVD about caregiving in the family child care setting and how children learn; and a CD-ROM with copies of forms and letters to parents. Versions of the curriculum for infant and toddler and preschool classrooms are also available.</td>
<td>Social-emotional, physical, language, cognitive, literacy, mathematics, science and technology, social studies, the arts, and English-language acquisition</td>
<td>Family child care providers caring for children birth to age 12</td>
</tr>
<tr>
<td>The Creative Curriculum for Infants, Toddlers &amp; Twos, Third Edition</td>
<td>The Creative Curriculum for Infants, Toddlers &amp; Twos, Third Edition, is an early childhood education curriculum that is designed to help teachers (1) set up the learning environment; (2) plan developmentally appropriate routines and experiences for every day of the week; (3) promote children’s social-emotional, language, cognitive, and physical development, as well as content area learning in literacy, mathematics, science and technology, social studies, and the arts; and (4) build partnerships with families. The curriculum comprises three foundational volumes and several additional resources, including Book Conversation Cards; Mighty Minutes for Infants, Toddlers &amp; Twos; Intentional Teaching Cards; The Creative Curriculum LearningGames; and Highlights Hello magazines. Related materials available separately from the curriculum include two training videos on early language and literacy development; guides for families on ways they can extend classroom activities at home; and Teaching Strategies GOLD, an observational assessment for children from birth through third grade. Versions of the curriculum for center-based preschool classrooms and family child care providers are also available.</td>
<td>Social-emotional, language, cognitive, and physical development, as well as content area learning in literacy, mathematics, science and technology, social studies, and the arts</td>
<td>Caregivers of children birth to age 3</td>
</tr>
<tr>
<td>Hawaii Early HELP 0-3</td>
<td>Hawaii Early HELP 0-3 is a comprehensive, ongoing, curriculum-based assessment process</td>
<td>Cognitive, language,</td>
<td>Parents and non-parental</td>
</tr>
</tbody>
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B.6
<table>
<thead>
<tr>
<th>Model name</th>
<th>Overview and key components</th>
<th>Targeted outcomes</th>
<th>Target population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Learning Profile (HELP): 0-3</td>
<td>for use by providers working with infants and toddlers and their families. The HELP 0-3 system includes (1) the assessment; (2) a family interview designed to assess children’s developmental skills and behaviors and identify family concerns, priorities and resources; (3) the HELP Activity Guide, a curricular resource that includes activities linked to each skill assessed by the HELP assessment, which caregivers can use with children; (4) HELP at Home, a curriculum designed for providers to individualize and give to families to use with their children; and (5) HELP When the Parent has Disabilities, an activity guide adapted to accommodate parents who have disabilities. The HELP 0-3 system covers 685 developmental skills and behaviors across the following six domains: cognitive, language, gross motor, fine motor, social-emotional, and self-help. HELP 0-3 products are cross-referenced through skill identification numbers for easy linking between assessment and curriculum materials. Programs implementing HELP 0-3 can use KinderCharts.net, an online system designed to measure children’s developmental progress in essential domains that is directly aligned with the HELP 0-3 assessments. Versions of the assessment and curriculum for children ages 3 to 6 are also available.</td>
<td>gross motor, fine motor, social-emotional, and self-help</td>
<td>caregivers of children birth through age 3 as well as Part C early intervention providers for infants and toddlers who have developmental concerns</td>
</tr>
<tr>
<td>HighScope Infant-Toddler Curriculum</td>
<td>The HighScope Infant-Toddler Curriculum uses a process of active learning—that consists of experiences and exploration with people, materials, events, and ideas. During active learning, caregivers scaffold (support and gently extend) infant and toddler learning by encouraging them to investigate the world around them. Learning and development are anchored by long-term, trusting relationships with caregivers. The curriculum is organized around six content areas and includes guidance for caregivers on teaching practices designed to support children’s growth and learning. The six content areas are: (1) approaches to learning; (2) social and emotional development; (3) physical development and health; (4) communication, language, and literacy; (5) cognitive development; and (6) creative arts. The teaching practices include adult–child interactions, arrangement of the physical environment, the use of daily schedules and routines, and observations and planning for children. The curriculum is linked to HighScope’s comprehensive online child assessment tool, called the Child Observation Record Advantage, which covers development from birth through kindergarten. Preschool and elementary school versions of the curriculum are available.</td>
<td>Approaches to learning; social and emotional development; physical development and health; communication, language, and literacy; cognitive development; and creative arts</td>
<td>Out-of-home caregivers of children birth to age 3</td>
</tr>
</tbody>
</table>
## Table B.2. Overview of compelling model implementation guidelines

<table>
<thead>
<tr>
<th>Model name</th>
<th>Dosage</th>
<th>Program length</th>
<th>Staff education requirements</th>
<th>Staff training requirements</th>
<th>Supports for implementation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Early Learning Readiness (ELR) Program for Informal Family, Friend, and Neighbor Caregivers</td>
<td>Twice per week; each session is 2 hours</td>
<td>38 to 42 weeks per year</td>
<td>Not specified, although a background in early childhood, education, or social work is recommended for local supervisors and facilitators</td>
<td>The program has a training plan for newly hired local staff that includes in-person training sessions, online modules on broader topics such as development and achievement gaps, and webinars on specific program components.</td>
<td>Training materials Qualified trainers Fidelity tools Systems for monitoring fidelity</td>
</tr>
<tr>
<td>Educare</td>
<td>Full-day (locally determined but minimum of 6 hours per day), full-year services</td>
<td>Up to 5 years (from age 6 weeks to kindergarten entry)</td>
<td>Each classroom has a lead teacher with a minimum of a bachelor’s degree in early childhood education; an assistant teacher with a minimum of an associate degree in early childhood education; and a teacher aide with a high school diploma/GED and a credential in child development or training in infant and toddler development. Master teachers have master’s degrees in early childhood education; for birth-to-age-3 classrooms, they have special training in infant and toddler development. Family support supervisors have</td>
<td>Not specified</td>
<td>Operation/ implementation manuals Training materials Qualified trainers Fidelity tools Systems for monitoring fidelity</td>
</tr>
<tr>
<td>Model name</td>
<td>Dosage</td>
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<tr>
<td>Early Childhood Consultation Partnership (ECCP)</td>
<td>Weekly, 1.5 to 3 hours depending on visit type</td>
<td>6 weeks for child services; 12 to 14 weeks for classroom services; 9 months for center services</td>
<td>Staff education requirements include master’s degrees in social work or a related field, and family support specialists have bachelor's or master’s degrees in social work, health, or a related field.</td>
<td>Staff training requirements include ECCP consultants must have a master’s-level degree in a human services field, such as social work, counseling, or child development, and preferably are licensed mental health providers.</td>
<td>Supports for implementation include ECCP consultants receive orientation and an initial series of trainings in early childhood mental health consultation during their first six months. After this initial phase, consultants are provided additional trainings as continuing education and receive regular supervision from the ECCP leadership team that has clinical, reflective, and administrative components.</td>
</tr>
<tr>
<td>Expanding Quality in Infant Toddler Care (EQIT) course and EQ RELATE Model of Coaching</td>
<td>The EQIT course is typically offered biweekly for 6 hours per class. Total direct class time is 48 hours. The number of hours of coaching offered to each participant is determined on an individual basis and may depend on the availability of funding</td>
<td>The EQIT course is typically offered over a 16-week period. Coaching is offered during the course, and for course graduates, for up to one year following completion of the course.</td>
<td>Not specified</td>
<td>Course instructors must complete an 80-hour train-the-trainer course, which includes additional written work, and have previously completed the EQIT course or a similar infant-toddler course. They must obtain approval to be an intermediate-level trainer from Colorado’s trainer approval system.</td>
<td>Operation/implementation manuals, Training materials, Qualified trainers, Fidelity tools, Systems for monitoring fidelity.</td>
</tr>
<tr>
<td>Model name</td>
<td>Dosage</td>
<td>Program length</td>
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<td>Staff training requirements</td>
<td>Support for implementation</td>
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<tr>
<td>First Beginnings</td>
<td>Each training module is 3 hours; some classes include five or seven modules. On-site consultation consists of three 1-hour visits.</td>
<td>3 to 4 months</td>
<td>There are no requirements for instructors or consultants, although in one study of the program, consultants all held master's or bachelor's degrees.</td>
<td>There are no requirements for instructors or consultants, although in one study of the program, the consultants participated in a 3-hour training session before the program started.</td>
<td>Operation/ implementation manuals</td>
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<td>Training materials</td>
</tr>
<tr>
<td>Infant Caregiver Mentoring Project</td>
<td>Approximately 20 hours of mentoring per month; total of 80 hours</td>
<td>4 months</td>
<td>Not specified</td>
<td>Mentors complete seven days of training before the program starts. The topics covered during the training include building relationships as a mentor, other skills to be effective as a mentor, and infant and toddler development.</td>
<td>Operation/ implementation manuals</td>
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<td>Training materials</td>
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<td></td>
<td>Qualified trainers</td>
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<tr>
<td>Seeds to Success</td>
<td>Up to 8 hours of coaching per month</td>
<td>6 months</td>
<td>Not specified, although the implementing</td>
<td>In preparation for implementation,</td>
<td>Training materials</td>
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<td></td>
<td></td>
<td></td>
<td>Qualified trainers</td>
</tr>
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<tr>
<td>Smart Support</td>
<td>Weekly for 2 to 3 hours per visit</td>
<td>The average length of participation is approximately 1 year, but varies and can range from several months to much longer than 1 year</td>
<td>Mental health consultants must have a master’s-level degree in a mental health discipline. Supervisors of mental health consultants must have a license in a mental health field.</td>
<td>New consultants go through a week-long orientation that includes 16 classroom hours, shadow with experienced consultants, and are expected to complete trainings on attachment, trauma, self-regulation, and other subjects as well as attend quarterly meetings that review key aspects of the</td>
<td>Operation/ implementation manuals Training materials Qualified trainers Fidelity tools Systems for monitoring fidelity</td>
</tr>
<tr>
<td>Model name</td>
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<tr>
<td>Assessment, Evaluation, and Programming System (AEPS), Second Edition, Curriculum for Birth to Three Years</td>
<td>Not specified</td>
<td>Not specified</td>
<td>Not specified, although designed to be implemented by professionals</td>
<td>Not specified</td>
<td>Operation/ implementation manuals Qualified trainers</td>
</tr>
<tr>
<td>The Creative Curriculum for Family Child Care, Second Edition</td>
<td>Not specified</td>
<td>Not specified</td>
<td>Not specified</td>
<td>Not specified</td>
<td>Operation/ implementation manuals Training materials Qualified trainers</td>
</tr>
<tr>
<td>The Creative Curriculum for Infants, Toddlers &amp; Twos, Third Edition</td>
<td>Not specified</td>
<td>Not specified</td>
<td>Not specified</td>
<td>Not specified</td>
<td>Operation/ implementation manuals Training materials Qualified trainers</td>
</tr>
<tr>
<td>Hawaii Early Learning Profile (HELP): 0-3</td>
<td>Not specified</td>
<td>HELP 0-3 provides materials relevant for a three-year period (from birth to age 3)</td>
<td>There are no requirements, but staff using HELP for the Part C assessment process should meet their state’s definition of qualified personnel. Any staff with knowledge of</td>
<td>Not specified</td>
<td>Operation/ implementation manuals Training materials Qualified trainers</td>
</tr>
</tbody>
</table>

model over a 12-month period. Other ongoing professional development activities for all consultants include a monthly book club, regular training opportunities (which may be required, or optional training that a consultant can request to attend), and weekly meetings with supervisors that use a reflective supervision approach.
infant-toddler development can use HELP as a curricular program.

<table>
<thead>
<tr>
<th>Model name</th>
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</tr>
</thead>
<tbody>
<tr>
<td>HighScope Infant-Toddler Curriculum</td>
<td>Not specified</td>
<td>Not specified</td>
<td>There are no requirements for the curriculum, but HighScope adheres to the staffing requirements of the agency or program using the curriculum</td>
<td>None specified, although caregivers who complete a rigorous 20-day training program can meet requirements for HighScope teacher certification</td>
<td>Operation/ implementation manuals Training materials Qualified trainers Fidelity tools Systems for monitoring fidelity</td>
</tr>
</tbody>
</table>

*Currently, fidelity tools are not available for The Creative Curriculum for Infants, Toddlers & Twos, but the developer plans to publish them by the end of 2015.*
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Our literature search was designed to locate published research on the 13 compelling models that we identified. In this appendix, we describe the methods we used to carry out the literature search, the screening procedures we used to identify relevant literature, and the results of the literature search.

A. Targeted search for relevant literature

We searched for all relevant literature on the 13 compelling models. To maximize our search results, we implemented the following search techniques.

Step 1. Develop focused search terms. Building off the search terms used for the LITES systematic review, we worked closely with our librarians to develop search terms that captured the range of relevant literature on the compelling models (Table C.1). We included the model names as key search terms.

Table C.1. Search terms used for the LITES compelling models literature search

<table>
<thead>
<tr>
<th>Category</th>
<th>ID</th>
<th>Search term</th>
</tr>
</thead>
<tbody>
<tr>
<td>Search Restrictions</td>
<td>--</td>
<td>Studies published in English only</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Studies published during or after 1960</td>
</tr>
<tr>
<td>Model name</td>
<td>S1</td>
<td>Each model was searched individually</td>
</tr>
<tr>
<td>Activity</td>
<td>S2</td>
<td>[(early near educat*) or preschool or “pre-school” or childcare or “child care” or daycare or “day care” or “nursery school” or “early learn” or “nonparental care” or “non-parental care” or “early care” or “center based” or “center-based” or “infant care” or “toddler care” or “early childhood” or “child develop*] And (program* or intervention* or service* or model*)</td>
</tr>
<tr>
<td>Target group</td>
<td>S3</td>
<td>“birth to three” or “zero to three” or baby or babies or infant* or newborn* or toddler* or (birth near “36 mo”) or (prenatal near “36 mo”) or “birth to 3” or zero to 3” or “0 to 3”</td>
</tr>
<tr>
<td>Document type</td>
<td>S4</td>
<td>(stud* or studies* or evaluat* or research or trial or experiment* or “clinical trial” or “controlled clinical trial” or “controlled study” or “randomized control trial” or longitudinal stud* or “program evaluation” “quasi-experimental” “matched group comparison design” or “pre post” or “correlational” or “descriptive” or “implementation” or “case study”) and (effect* or efficac* or impact* or outcome* or evidence or implement* or fidelity or cost* or replic* or finding* or result*)</td>
</tr>
</tbody>
</table>

Combine terms      | S5  | S1 AND S2 AND S3 AND S4                                                     |

Notes: When performing proximity searches (for instance, quality near child care), we recommend using a parameter that defines near as within five words of to optimize our ability to find relevant literature without capturing a large volume of irrelevant literature. Searches look back to 1960 only if a given database has literature of that age; otherwise, we begin the search at the earliest available date.

Step 2. Database search. Using the focused search terms, the Mathematica library staff initiated a search of titles, abstracts, subjects, and key words within numerous databases. Table C.2 lists each of the databases searched. All databases were searched for all models with one exception. The search for Educare in Child Care and Early Education Research Connections resulted in an extremely high number of citations. As a result, we conducted a separate and more targeted screening process of these citations. The citations, with the exception of one citation that screened in, were not included in RefWorks and therefore are not included in the results listed in Table B.3.

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All databases were searched for all models with one exception. The search for Educare in Child Care and Early Education Research Connections resulted in an extremely high number of citations. As a result, we conducted a separate and more targeted screening process of these citations. The citations, with the exception of one citation that screened in, were not included in RefWorks and therefore are not included in the results listed in Table B.3.
techniques—such as proximity searches—to optimize our ability to find relevant literature (for example, requiring the words *early, childhood,* and *education* to be within five words of one another). Databases differ in how they organize content; therefore, the librarians tailored the search methods to the databases and checked the project search terms against keyword and subject terms for each database when possible to ensure we did not overlook relevant citations. The librarians saved literature search results in a designated project account created in RefWorks, an online (but private and password-protected) bibliographic management system that enables storing, scanning, and sorting a customized list of study citations and abstracts.

### Table C.2. Databases searched for the LITES compelling models literature search

<table>
<thead>
<tr>
<th>Academic Search Premier</th>
<th>Campbell Collaboration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Child Care and Early Education Research Connections</td>
<td>CINAHL with Full Text</td>
</tr>
<tr>
<td>Cochrane Central Register of Controlled Trials</td>
<td>Cochrane Database of Systematic Reviews</td>
</tr>
<tr>
<td>Cochrane Methodology Register</td>
<td>Database of Abstracts of Reviews of Effects</td>
</tr>
<tr>
<td>EconLit</td>
<td>Education Research Complete</td>
</tr>
<tr>
<td>E-Journals</td>
<td>ERIC</td>
</tr>
<tr>
<td>MedLine</td>
<td>PsycINFO</td>
</tr>
<tr>
<td>ProQuest Dissertations &amp; Theses</td>
<td>SAGE Journals</td>
</tr>
<tr>
<td>SocINDEX with Full Text</td>
<td>Scopus</td>
</tr>
</tbody>
</table>

### B. Screening procedures

After we completed the search, trained staff conducted a multistep screening procedure to identify the most relevant citations. All screening was conducted in RefWorks. Citations screened out were assigned a disposition code describing the reason for their exclusion.

**Step 1. Preliminary screening.** In this step, we removed citations from our list that were not useful to the review.

- **Deduplication of citations.** When using the search terms across multiple databases, searches sometimes identified the same citation in more than one database. We retained only one copy of each citation, deleting the others from RefWorks.

- **Exclude publications that are not studies.** Screeners next eliminated any irrelevant non-study citations the search terms yielded (for example, letters to the editor, book reviews, or press releases). These were not considered further but remained in RefWorks labeled as *nonstudies.*

- **Not a model.** Screeners also eliminated studies that did not focus on one of the 13 named compelling models. These were not considered further but remained in RefWorks labeled as *not a named model.*

**Step 2. Screening.** After the removal of non-studies and studies that did not examine a named model, additional screening for relevance was necessary using the study abstracts and, if needed, the full text of the citation. For instance, some studies focused on a named model but the target population for the study was preschool-age children rather than infants and toddlers. We screened out studies for the following reasons:
• **Not policy relevant.** We excluded studies of early care and education (ECE) models delivered in a developing-world context.

• **Not a primary study.** We excluded summaries of studies reported elsewhere (for example, literature reviews or meta-analyses).

• **Target population out of range.** We excluded studies in which the children or families were not enrolled in the ECE services before the child reached age 36 months.

**C. Literature search results**

Our search yielded 253 unduplicated studies. Of these, 7 studies screened in. The primary reason studies screened out was because they were not focused on a named model. In addition, we excluded 41 citations that were not studies. Table C.3 provides detailed information about the search and screening results.

**Table C.3. Literature search and screening results**

| Total number of unduplicated studies | 253 |
| Screened in | 7 |
| Step 1: Screened out |  |
| Not a study | 41 |
| Not a named model | 176 |
| Step 2: Screened out |  |
| Not policy relevant | 17 |
| Not a primary study | 3 |
| Target population out of range | 9 |
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Improving public well-being by conducting high quality, objective research and data collection

PRINCETON, NJ ■ ANN ARBOR, MI ■ CAMBRIDGE, MA ■ CHICAGO, IL ■ OAKLAND, CA ■ WASHINGTON, DC
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*Acknowledgements*

*Caring for our Children Basics* is based on *Caring for Our Children: National Health and Safety Performance Standards; Guidelines for Early Care and Education Programs, Third Edition*. We would like to acknowledge the extensive work of the American Academy of Pediatrics; American Public Health Association; National Resource Center for Health and Safety in Child Care and Early Education; and Maternal and Child Health Bureau, Department of Health and Human Services in developing these standards. We would also like to especially thank the following experts for their help in this effort:

- **Abby Alkon, RN, Ph.D.**
  School of Nursing
  University of California, San Francisco

- **Judy Collins**
  Consultant

- **Richard Fiene, Ph.D.**
  Research Institute for Key Indicators

- **Walter Gilliam, Ph.D.**
  Edward Zigler Center in Child Development and Social Policy
  Yale University Child Study Center

- **Barbara Hamilton, MA**
  Maternal and Child Health Bureau
  Health Resources and Services Administration
  U.S. Department of Health and Human Services

- **Pauline D. Koch**
  Koch Consulting

- **Marilyn Krajicek, Ed.D., RN, FAAN**
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  College of Nursing
  University of Colorado Denver

- **Beverly Schmalzreid, Ph.D.**
  Department of Child Development
  South Texas College

- **Danette Swanson Glassy, MD, FAAP**
  American Academy of Pediatrics

- **Nancy Von Bargen, MS**
  Office of Child Care National Center for Child Care Quality Improvement

- **Jeanne VanOrsdal, M. Ed.**
  Early Education and Child Care Initiatives
  American Academy of Pediatrics

- **Marcus Williams**
  National Association for Regulatory Administration
Introduction

Evidence continues to mount that demonstrates the profound influence children’s earliest experiences have on later success. Nurturing and stimulating care given in the early years builds optimal brain architecture that allows children to maximize their potential for learning. Interventions in the first years of life are capable of altering the course of development and shift the odds for those at risk of poor outcomes toward more adaptive ones.

To meet the needs of our nation’s most vulnerable children and families, the early care and education programs administered by the Administration for Children and Families (ACF) are designed to both provide enriching early childhood experiences that promote the long-term success of children and assist low-income working parents with the cost of child care. In partnership with families, all early care and education programs should support children’s needs and age-appropriate progress across domains of language and literacy development; cognition and general knowledge; approaches to learning; physical health and well-being and motor development, and social and emotional development that will improve readiness for kindergarten. Head Start, Early Head Start, pre-Kindergarten, and child care programs aim to support the ability of parents, teachers, child care providers and other community members to interact positively with children in stable and stimulating environments to help create a sturdy foundation for later school achievement, economic productivity, and responsible citizenship.

ACF strives to achieve the following goals in all early childhood programs:

- Build successful Early Learning and Development Systems across Early Head Start, Head Start, child care, and pre-Kindergarten.
- Promote high quality and accountable early learning and development programs for all children.
- Ensure an effective early childhood workforce.
- Improve the physical, developmental, mental health, and social well-being of children in early learning and development settings.
- Promote family engagement and support in a child’s development with the recognition that parents are their children’s primary teachers and advocates.
- Build on the strengths and address the needs of culturally and linguistically diverse children and families.
- Improve the health and safety of early learning and development settings.

While high quality early care and education settings can have significant developmental benefits and other positive long term effects for children well into their adult years, poor quality settings can result in unsafe environments that disregard children’s basic physical and emotional needs leading to neglect, toxic stress, injury, or even death. As a result, it is not surprising that health and safety has been identified in multiple parent surveys as one of the most important factors to consider when evaluating child care options (Shlay, 2010). Health and
safety practices provide the foundation on which states and communities build quality early care and education settings.

Licensing of center-based care and family child care homes is a process that establishes the minimum requirements necessary to protect the health and safety of children in care. State licensing requirements are regulatory requirements, including registration or certification requirements, established under State law necessary for a provider to legally operate and provide child care services.

From 2009 to 2011, more than half of states made changes to licensing regulations for center-based care and family child care homes. For example, states increased the pre-service training requirements for center directors, and increased the number of ongoing training hours for all center staff roles, as well as family child care providers. Specifically, 47 States require center staff and 37 States require family child care providers to complete first aid training. With respect to CPR, 46 States require training of center staff and 36 require it of family child care providers. More than half of States require center staff to complete training on child abuse and neglect (27 States) or the prevention of communicable diseases (25 States). The number of States requiring fingerprint checks of federal records and checks of sex offender registries has increased since 2007. All States that license centers and more than 85% that license family child care homes have requirements about the nutritional content of meals and snacks served to children. States have added requirements about fences for outdoor space, transportation, and emergency preparedness, and more States prohibit firearms in child care centers (Office of Child Care National Center on Child Care Quality Improvement and National Association for Regulatory Administration, 2013).

Great progress has been made in States to safeguard children in out of home care, yet more work must be done to ensure children can learn, play, and grow in settings that are safe and secure. States vary widely in the number and content of health and safety standards as well as the means by which they monitor compliance. Some early care and education programs may receive no monitoring while others receive multiple visits. Further, some programs who receive funding from multiple sources may receive repeated monitoring visits that evaluate programs against complicated, and sometimes conflicting, standards. While there are differences in health and safety requirements by funding stream (e.g. Head Start, Child Care Development Fund, Individuals with Disabilities Education Act, and Title I), early childhood program type (e.g. center-based, family child care homes) and length of time in care, there are basic standards that must be in place to protect children no matter what type of variation in program. Until now, there has been no federal guidance that supports States in creating basic, consistent health and safety standards across early care and education settings.

ACF is pleased to announce Caring for Our Children Basics: Health and Safety Foundations for Early Care and Education. Caring for our Children Basics represents the minimum health and safety standards experts believe should be in place where children are cared for outside of their homes. Caring for our Children Basics seeks to reduce the conflicts and redundancy found in program standards linked to multiple funding streams. Caring for our Children Basics should not
be construed to represent all standards that should be present to achieve the highest quality of care and early learning. For example, the caregiver training requirements outlined in these standards are designed only to prevent harm to children, not to ensure their optimal development and learning.

*Caring for our Children Basics* is the result of work from both federal and non-federal experts and is founded on *Caring for Our Children: National Health and Safety Performance Standards; Guidelines for Early Care and Education Programs, Third Edition*, created by the American Academy of Pediatrics; American Public Health Association; and National Resource Center for Health and Safety in Child Care and Early Education with funding from the Maternal and Child Health Bureau. The Office of Child Care, Office of Head Start, Office of the Deputy Assistant Secretary for Early Childhood, and the Maternal and Child Health Bureau were instrumental in this effort. Although use of *Caring for our Children Basics* is not federally required, the set of standards was posted for public comment in the Federal Register to provide ACF with practical guidance to aid in refinement and application. The standards, regulations, and guidance with which *Caring for our Children Basics* was produced are located at the end of this document.

Quality care can be achieved with consistent, basic health and safety practices in place. Though voluntary, ACF hopes *Caring for Our Children Basics* will be a helpful resource for states and other entities as they work to improve health and safety standards in both licensing and quality rating improvement systems (QRIS). As more states build their QRIS, it is hoped that *Caring for Our Children Basics* will support continuous quality improvement in programs as they move to higher levels of quality and improve the overall health and well-being of all children in out-of-home settings. In addition, ACF anticipates *Caring for Our Children Basics* will support efficiency and effectiveness of monitoring systems for early care and education settings. A common framework will assist the Nation in working towards and achieving a more consistent foundation for quality upon which families can rely.
Staffing

1.1.1.1-1.1.1.5 Ratios for Centers and Family Child Care Homes
Appropriate ratios should be kept during all hours of program operation. Children with special health care needs or who require more attention due to certain disabilities may require additional staff on-site, depending on their needs and the extent of their disabilities.

In center-based care, child-provider ratios should be determined by the age of the majority of children and the needs of children present.

<table>
<thead>
<tr>
<th>Child Care Centers</th>
<th>Maximum Child: Provider Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>≤ 12 months</td>
<td>4:1</td>
</tr>
<tr>
<td>13-23 months</td>
<td>4:1</td>
</tr>
<tr>
<td>24-35 months</td>
<td>4:1-6:1</td>
</tr>
<tr>
<td>3-year-olds</td>
<td>9:1</td>
</tr>
<tr>
<td>4- to 5-year-olds</td>
<td>10:1</td>
</tr>
</tbody>
</table>

In family child care homes, the provider’s own children under the age of 6, as well as any other children in the home temporarily requiring supervision, should be included in the child: provider ratio. In family child care settings where there are mixed age groups that include infants and toddlers, a maximum ratio of 6:1 should be maintained and no more than two of these children should be 24 months or younger. If all children in care are under 36 months, a maximum ratio of 4:1 should be maintained and no more than two of these children should be 18 months or younger. If all children in care are 3 years old, a maximum ratio of 7:1 should be preserved. If all children in care are 4 to 5 years of age, a maximum ratio of 8:1 should be maintained.

1.2.0.2 Background Screening
All caregivers/teachers and staff in early care and education settings (in addition to any individual age 18 and older, or a minor over age 12 if allowed under State law and if a registry/database includes minors, residing in a family child care home) should undergo a complete background screening upon employment and once at least every five years thereafter. Screening should be conducted as expeditiously as possible and should be completed within 45 days after hiring. Caregivers/teachers and staff should not have unsupervised access to children until screening has been completed. Consent to the background investigation should be required for employment consideration. The comprehensive background screening should include the following:

a) A search of the State criminal and sex offender registry or repository in the State where the child care staff member resides, and each State where such staff member resided during the preceding 5 years;
b) A search of State-based child abuse and neglect registries and databases in the State where the child care staff member resides, and each State where such staff member resided during the preceding 5 years; and
c) A Federal Bureau of Investigation fingerprint check using Next Generation Identification.

Directors/programs should review each employment application to assess the relevancy of any issue uncovered by the complete background screening, including any arrest, pending criminal charge, or conviction, and should use this information in employment decisions in accordance with state laws.

1.4.1.1/1.4.2.3 Pre-service Training/Orientation
Before or during the first three months of employment, training and orientation should detail health and safety issues for early care and education settings including, but not limited to, typical and atypical child development; pediatric first aid and CPR; safe sleep practices, including risk reduction of Sudden Infant Death Syndrome/Sudden Unexplained Infant Death (SIDS/SUID); poison prevention; shaken baby syndrome and abusive head trauma; standard precautions; emergency preparedness; nutrition and age-appropriate feeding; medication administration; and care plan implementation for children with special health care needs. Caregivers/teachers should complete training before administering medication to children. See Standard 3.6.3.3 for more information. All directors or program administrators and caregivers/teachers should document receipt of training.

Providers should not care for children unsupervised until they have completed training in pediatric first aid and CPR; safe sleep practices, including risk reduction of Sudden Infant Death Syndrome/Sudden Unexplained Infant Death (SIDS/SUID); standard precautions for the prevention of communicable disease; poison prevention; and shaken baby syndrome/abusive head trauma.

1.4.3.1 First Aid and CPR Training for Staff
All staff members involved in providing direct care to children should have up-to-date documentation of satisfactory completion of training in pediatric first aid and current certification in pediatric CPR. Records of successful completion of training in pediatric first aid and CPR should be maintained in the personnel files of the facility.

1.4.4.1/1.4.4.2 Continuing Education for Directors, Caregivers/Teachers in Centers, and Family Child Care Homes
Directors and caregivers/teachers should successfully complete intentional and sequential education/professional development in child development programming and child health, safety, and staff health based on individual competency and any special needs of the children in their care.

1.4.5.2 Child Abuse and Neglect Education
Caregivers/teachers should be educated on child abuse and neglect to establish child abuse and neglect prevention and recognition strategies for children, caregivers/teachers, and parents/guardians. The education should address physical, sexual, and psychological or
emotional abuse and neglect. Caregivers/teachers are mandatory reporters of child abuse or neglect. Caregivers/teachers should be trained in compliance with their state's child abuse reporting laws.

Program Activities for Healthy Development

2.1.1.4 Monitoring Children's Development/Obtaining Consent for Screening
Programs should have a process in place for age-appropriate developmental and behavioral screenings for all children at the beginning of a child's enrollment in the program, at least yearly thereafter, and as developmental concerns become apparent to staff and/or parents/guardians. Providers may choose to conduct screenings, themselves; partner with a local agency/health care provider/specialist who would conduct the screening; or work with parents in connecting them to resources to ensure that screening occurs. This process should consist of parental/guardian education, consent, and participation as well as connection to resources and support, including the primary health care provider, as needed. Results of screenings should be documented in child records.

2.1.2.1/2.1.3.1 Personal Caregiver/Teacher Relationships for Birth to Five-Year-Olds
Programs should implement relationship-based policies and program practices that promote consistency and continuity of care, especially for infants and toddlers. Early care and education programs should provide opportunities for each child to build emotionally secure relationships with a limited number of caregivers/teachers. Children with special health care needs may require additional specialists to promote health and safety and to support learning.

2.2.0.1 Methods of Supervision of Children
In center-based programs, caregivers/teachers should directly supervise children under age 6 by sight and sound at all times. In family child care settings, caregivers should directly supervise children by sight or sound. When children are sleeping, caregivers may supervise by sound with frequent visual checks.

Developmentally appropriate child-to-staff ratios should be met during all hours of operation, and safety precautions for specific areas and equipment should be followed. Children under the age of 6 should never be inside or outside by themselves.

2.2.0.4 Supervision near Water
Constant and active supervision should be maintained when any child is in or around water. During swimming and/or bathing where an infant or toddler is present, the ratio should always be one adult to one infant/toddler. During wading and/or water play activities, the supervising adult should be within an arm’s length providing “touch supervision.” Programs should ensure that all pools have drain covers that are used in compliance with the Virginia Graeme Baker Pool and Spa Safety Act.
2.2.0.8 Preventing Expulsions, Suspensions, and Other Limitations in Services

Programs should have a comprehensive discipline policy that includes developmentally appropriate social-emotional and behavioral health promotion practices as well as discipline and intervention procedures that provide specific guidance on what caregivers/teachers and programs should do to prevent and respond to challenging behaviors. Programs should ensure all caregivers/teachers have access to pre- and in-service training on such practices and procedures. Practices and procedures should be clearly communicated to all staff, families, and community partners, and implemented consistently and without bias or discrimination. Preventive and discipline practices should be used as learning opportunities to guide children’s appropriate behavioral development.

Programs should establish policies that eliminate or severely limit expulsion, suspension, or other exclusionary discipline (including limiting services); these exclusionary measures should be used only in extraordinary circumstances where there are serious safety concerns¹ that cannot otherwise be reduced or eliminated by the provision of reasonable modifications.

2.2.0.9 Prohibited Caregiver/Teacher Behaviors

The following behaviors should be prohibited in all early care and education settings:

a) The use of corporal punishment including, but not limited to:
   i. Hitting, spanking, shaking, slapping, twisting, pulling, squeezing, or biting;
   ii. Demanding excessive physical exercise, excessive rest, or strenuous or bizarre postures;
   iii. Compelling a child to eat or have in his/her mouth soap, food, spices, or foreign substances;
   iv. Exposing a child to extremes of temperature.

b) Isolating a child in an adjacent room, hallway, closet, darkened area, play area, or any other area where a child cannot be seen or supervised;

c) Binding, tying to restrict movement, or taping the mouth;

d) Using or withholding food or beverages as a punishment;

e) Toilet learning/training methods that punish, demean, or humiliate a child;

f) Any form of emotional abuse, including rejecting, terrorizing, extended ignoring, isolating, or corrupting a child;

g) Any abuse or maltreatment of a child;

h) Abusive, profane, or sarcastic language or verbal abuse, threats, or derogatory remarks about the child or child’s family;

i) Any form of public or private humiliation, including threats of physical punishment (1);

j) Physical activity/outdoor time taken away as punishment;

k) Placing a child in a crib for a time-out or for disciplinary reasons.

¹ Determinations of safety concerns must be based on actual risks, best available objective evidence, and cannot be based on stereotypes or generalizations.
Health Promotion and Protection

3.1.3.1 Active Opportunities for Physical Activity
Programs should promote developmentally appropriate active play for all children, including infants and toddlers, every day. Children should have opportunities to engage in moderate to vigorous activities indoors and outdoors, weather permitting.

3.1.4.1 Safe Sleep Practices and SIDS Risk Reduction
All staff, parents/guardians, volunteers, and others who care for infants in the early care and education setting should follow safe sleep practices as recommended by the American Academy of Pediatrics (AAP). Cribs must be in compliance with current U.S. Consumer Product Safety Commission (CPSC) and ASTM International safety standards. See Standard 5.4.5.2 for more information.

3.1.5.1 Routine Oral Hygiene Activities
Caregivers/teachers should promote good oral hygiene through learning activities including the habit of regular tooth brushing.

3.2.1.4 Diaper Changing Procedure
The following diaper changing procedure should be posted in the changing area and followed to protect the health and safety of children and staff:

Step 1: Before bringing the child to the diaper changing area, perform hand hygiene and bring supplies to the diaper changing area.
Step 2: Carry/bring the child to the changing table/surface, keeping soiled clothing away from you and any surfaces you cannot easily clean and sanitize after the change. Always keep a hand on the child.
Step 3: Clean the child's diaper area.
Step 4: Remove the soiled diaper and clothing without contaminating any surface not already in contact with stool or urine.
Step 5: Put on a clean diaper and dress the child.
Step 6: Wash the child's hands and return the child to a supervised area.
Step 7: Clean and disinfect the diaper-changing surface. Dispose of the disposable paper liner if used on the diaper changing surface in a plastic-lined, hands-free, covered can. If clothing was soiled, securely tie the plastic bag used to store the clothing and send home.
Step 8: Perform hand hygiene and record the diaper change, diaper contents, and/or any problems.

Caregivers/teachers should never leave a child unattended on a table or countertop. A safety strap or harness should not be used on the diaper changing table/surface.
3.2.2.1 Situations that Require Hand Hygiene

All staff, volunteers, and children should abide by the following procedures for hand washing, as defined by the U.S. Centers for Disease Control and Prevention (CDC):

a) Upon arrival for the day, after breaks, or when moving from one group to another.

b) Before and after:
   - Preparing food or beverages;
   - Eating, handling food, or feeding a child;
   - Brushing or helping a child brush teeth;
   - Giving medication or applying a medical ointment or cream in which a break in the skin (e.g., sores, cuts, or scrapes) may be encountered;
   - Playing in water (including swimming) that is used by more than one person; and
   - Diapering.

c) After:
   - Using the toilet or helping a child use a toilet;
   - Handling bodily fluid (mucus, blood, vomit);
   - Handling animals or cleaning up animal waste;
   - Playing in sand, on wooden play sets, and outdoors; and
   - Cleaning or handling the garbage.

Situations or times that children and staff should perform hand hygiene should be posted in all food preparation, diapering, and toileting areas.

3.3.0.1 Routine Cleaning, Sanitizing, and Disinfecting

Programs should follow a routine schedule of cleaning, sanitizing, and disinfecting. Cleaning, sanitizing, and disinfecting products should not be used in close proximity to children, and adequate ventilation should be maintained during use.

3.2.3.4 Prevention of Exposure to Blood and Body Fluids

Early care and education programs should adopt the use of Standard Precautions, developed by the Centers for Disease Control and Prevention (CDC), to handle potential exposure to blood and other potentially infectious fluids. Caregivers and teachers are required to be educated regarding Standard Precautions before beginning to work in the program and annually thereafter. For center-based care, training should comply with requirements of the Occupational Safety and Health Administration (OSHA).

3.4.1.1 Use of Tobacco, Alcohol, and Illegal Drugs

Directors, caregivers, volunteers, and staff should not be impaired due to the use of alcohol, illegal drugs or prescription medication during program hours. Tobacco, alcohol, and illegal drug use should be prohibited on the premises (both indoor and outdoor environments) and in any vehicles used by the program at all times. In family child care settings, tobacco and alcohol should be inaccessible to children.

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2 Family child care homes are exempt from posting procedures for hand washing but should follow all other aspects of this standard.
3.4.3.1 Emergency Procedures
Programs should have a procedure for responding to situations when an immediate emergency medical response is required. Emergency procedures should be posted and readily accessible. Child-to-provider ratios should be maintained, and additional adults may need to be called in to maintain the required ratio. Programs should develop contingency plans for emergencies or disaster situations when it may not be possible to follow standard emergency procedures. All providers and/or staff should be trained to manage an emergency until emergency medical care becomes available.

3.4.4.1 Recognizing and Reporting Suspected Child Abuse, Neglect, and Exploitation
Because caregivers/teachers are mandated reporters of child abuse and neglect, each program should have a written policy for reporting child abuse and neglect. The written policy should specify that in any instance where there is reasonable cause to believe that child abuse or neglect has occurred, the individual who suspects child abuse or neglect should report directly to the child abuse reporting hotline, child protective services, or the police, as required by state and local laws.

3.4.4.3 Preventing and Identifying Shaken Baby Syndrome and Abusive Head Trauma
All programs should have a policy and procedure to identify and prevent shaken baby syndrome and abusive head trauma. All caregivers/teachers who are in direct contact with children, including substitute caregivers/teachers and volunteers, should receive training on preventing shaken baby syndrome and abusive head trauma; recognition of potential signs and symptoms of shaken baby syndrome and abusive head trauma; strategies for coping with a crying, fussing, or distraught child; and the development and vulnerabilities of the brain in infancy and early childhood.

3.4.5.1 Sun Safety Including Sunscreen
Caregivers/teachers should ensure sun safety for themselves and children under their supervision by keeping infants younger than six months out of direct sunlight, limiting sun exposure when ultraviolet rays are strongest and applying sunscreen with written permission of parents/guardians. Manufacturer instructions should be followed.

3.4.6.1 Strangulation Hazards
Strings and cords long enough to encircle a child's neck, such as those on toys and window coverings, should not be accessible to children in early care and education programs.

3.5.0.1 Care Plan for Children with Special Health Care Needs
Children with special health care needs are defined as “. . . those who have or are at increased risk for a chronic physical, developmental, behavioral, or emotional condition and who also require health and related services of a type or amount beyond that required by children generally” (McPherson, 1998).

Any child who meets these criteria in an early care and education setting should have an up-to-date Routine and Emergent Care Plan, completed by their primary health care provider with input from parents/guardians, included in their on-site health record and readily accessible to
those caring for the child. Community resources should be used to ensure adequate information, training, and monitoring is available for early care and education staff. Caregivers should undergo training in pediatric first aid and CPR that includes responding to an emergency for any child with a special health care need.

3.6.1.1 Inclusion/Exclusion/Dismissal of Children
The program should notify parents/guardians when children develop new signs or symptoms of illness. Parent/guardian notification should be immediate for emergency or urgent issues. Staff should notify parents/guardians of children who have symptoms that require exclusion, and parents/guardians should remove children from the early care and education setting as soon as possible. For children whose symptoms do not require exclusion, verbal or written notification to the parent/guardian at the end of the day is acceptable. Most conditions that require exclusion do not require a primary health care provider visit before re-entering care.

When a child becomes ill but does not require immediate medical help, a determination should be made regarding whether the child should be sent home. The caregiver/teacher should determine if the illness:

a) Prevents the child from participating comfortably in activities;
b) Results in a need for care that is greater than the staff can provide without compromising the health and safety of other children;
c) Poses a risk of spread of harmful diseases to others;
d) Causes a fever and behavior change or other signs and symptoms (e.g., sore throat, rash, vomiting, and diarrhea). An unexplained temperature above 100 °F (37.8 °C) (armpit) in a child younger than 6 months should be medically evaluated. Any infant younger than 2 months of age with fever should get immediate medical attention.

If any of the above criteria are met, the child should be removed from direct contact with other children and monitored and supervised by a staff member known to the child until dismissed to the care of a parent/guardian, primary health care provider, or other person designated by the parent. The local or state health department will be able to provide specific guidelines for exclusion.

3.6.1.4 Infectious Disease Outbreak Control
During the course of an identified outbreak of any reportable illness at the program, a child or staff member should be excluded if the local health department official or primary health care provider suspects that the child or staff member is contributing to transmission of the illness, is not adequately immunized when there is an outbreak of a vaccine-preventable disease, or the circulating pathogen poses an increased risk to the individual. The child or staff member should be readmitted when the health department official or primary health care provider who made the initial determination decides that the risk of transmission is no longer present. Parents/guardians should be notified of any determination.

3.6.3.1/3.6.3.2 Medication Administration and Storage
The administration of medicines at the facility should be limited to:
a) Prescription or non-prescription medication (over-the-counter) ordered by the prescribing health professional for a specific child with written permission of the parent/guardian. Prescription medication should be labeled with the child’s name; date the prescription was filled; name and contact information of the prescribing health professional; expiration date; medical need; instructions for administration, storage, and disposal; and name and strength of the medication.

b) Labeled medications (over-the-counter) brought to the early care and education facility by the parent/guardian in the original container. The label should include the child’s name; dosage; relevant warnings as well as specific; and legible instructions for administration, storage; and disposal.

Programs should never administer a medication that is prescribed for one child to another child. Documentation that the medicine/agent is administered to the child as prescribed is required. Medication should not be used beyond the date of expiration. Unused medications should be returned to the parent/guardian for disposal.

All medications, refrigerated or unrefrigerated, should have child-resistant caps; be stored away from food at the proper temperature, and be inaccessible to children.

3.6.3.3 Training of Caregivers/Teachers to Administer Medication
Any caregiver/teacher who administers medication should complete a standardized training course that includes skill and competency assessment in medication administration. The course should be repeated according to state and/or local regulation and taught by a trained professional. Skill and competency should be monitored whenever an administration error occurs.

Nutrition and Food Service

4.2.0.3 Use of U.S. Department of Agriculture (USDA), Child and Adult Care Food Program (CACFP) Guidelines
Programs should serve nutritious and sufficient foods that meet the requirements for meals of the child care component of the USDA CACFP as referenced in 7 CFR 226.20.

4.2.0.6 Availability of Drinking Water
Clean, sanitary drinking water should be readily accessible in indoor and outdoor areas, throughout the day. On hot days, infants receiving human milk in a bottle may be given additional human milk, and those receiving formula mixed with water may be given additional formula mixed with water. Infants should not be given water, especially in the first six months of life.

4.2.0.10 Care for Children with Food Allergies
Each child with a food allergy should have a written care plan that includes:
   a) Instructions regarding the food(s) to which the child is allergic and steps to be taken to avoid that food;
b) A detailed treatment plan to be implemented in the event of an allergic reaction, including the names, doses, and methods of prompt administration of any medications. The plan should include specific symptoms that would indicate the need to administer one or more medications.

Based on the child's care plan and prior to caring for the child, caregivers/teachers should receive training for, demonstrate competence in, and implement measures for:

a) Preventing exposure to the specific food(s) to which the child is allergic;

b) Recognizing the symptoms of an allergic reaction;

c) Treating allergic reactions.

The written child care plan, a mobile phone, and the proper medications for appropriate treatment if the child develops an acute allergic reaction should be routinely carried on field trips or transport out of the early care and education setting.

The program should notify the parents/guardians immediately of any suspected allergic reactions, as well as the ingestion of or contact with the problem food even if a reaction did not occur. The program should contact the emergency medical services system immediately whenever epinephrine has been administered.

Each child’s food allergies should be posted prominently in the classroom and/or wherever food is served with permission of the parent/guardian.

4.3.1.3 Preparing, Feeding, and Storing Human Milk
Programs should develop and follow procedures for the preparation and storage of expressed human milk that ensures the health and safety of all infants, as outlined by the Academy of Breastfeeding Medicine Protocol #8; Revision 2010, and prohibits the use of infant formula for a breastfed infant without parental consent. The bottle or container should be properly labeled with the infant's full name and date; and should only be given to the specified child. Unused breast milk should be returned to parent in the bottle or container.

4.3.1.5 Preparing, Feeding, and Storing Infant Formula
Programs should develop and follow procedures for the preparation and storage of infant formula that ensures the health and safety of all infants. Formula provided by parents/guardians or programs should come in sealed containers. The caregiver/teacher should always follow the parent or manufacturer's instructions for mixing and storing of any formula preparation. If instructions are not readily available, caregivers/teachers should obtain information from the World Health Organization's Safe Preparation, Storage and Handling of Powdered Infant Formula Guidelines. Bottles of prepared or ready-to-feed formula should be labeled with the child's full name, time, and date of preparation. Prepared formula should be discarded daily if not used.
4.3.1.9 Warming Bottles and Infant Foods
Bottles and infant foods can be served cold from the refrigerator and do not have to be warmed. If a caregiver/teacher chooses to warm them, or a parent requests they be warmed, bottles should be warmed under running, warm tap water; using a commercial bottle warmer, stove top warming methods, or slow-cooking device; or by placing them in container of warm water. Bottles should never be warmed in microwaves. Warming devices should not be accessible to children.

4.5.0.10 Foods that Are Choking Hazards
Caregivers/teachers should not offer foods that are associated with young children's choking incidents to children under 4 years of age. Food for infants should be cut into pieces ¼ inch or smaller, food for toddlers should be cut into pieces ½ inch or smaller to prevent choking. Children should be supervised while eating, to monitor the size of food and that they are eating appropriately.

4.8.0.1 Food Preparation Area Access
Access to areas where hot food is prepared should only be permitted when children are supervised by adults who are qualified to follow sanitation and safety procedures.

4.9.0.1 Compliance with U.S. Food and Drug Administration (FDA) Food Code and State and Local Rules
The program should conform to applicable portions of the FDA Food Code and all applicable state and local food service rules and regulations for centers and family child care homes regarding safe food protection and sanitation practices.

Facilities, Supplies, Equipment, and Environmental Health
5.1.1.2 Inspection of Buildings
Existing and/or newly constructed, renovated, remodeled, or altered buildings should be inspected by a building inspector to ensure compliance with applicable state and local building and fire codes before the building can be used for the purpose of early care and education.

5.1.1.3 Compliance with Fire Prevention Code
Programs should comply with a state-approved or nationally recognized fire prevention code, such as the National Fire Protection Association (NFPA) 101: Life Safety Code.

5.1.1.5 Environmental Audit of Site Location
An environmental audit should be conducted before construction of a new building; renovation or occupation of an older building; or after a natural disaster to properly evaluate and, where necessary, remediate or avoid sites where children's health could be compromised. A written report that includes any remedial action taken should be kept on file. The audit should include assessments of:
  a) Potential air, soil, and water contamination on program sites and outdoor play spaces;
b) Potential toxic or hazardous materials in building construction, such as lead and asbestos; and
c) Potential safety hazards in the community surrounding the site.

5.1.6.6 Guardrails and Protective Barriers
Guardrails or protective barriers, such as baby gates, should be provided at open sides of stairs, ramps, and other walking surfaces (e.g., landings, balconies, porches) from which there is more than a 30 inch vertical distance to fall.

5.2.4.2 Safety Covers and Shock Protection Devices for Electrical Outlets
All accessible electrical outlets should be “tamper-resistant electrical outlets” that contain internal shutter mechanisms to prevent children from sticking objects into receptacles. In settings that do not have “tamper-resistant electrical outlets,” outlets should have “safety covers” that are attached to the electrical outlet by a screw or other means to prevent easy removal by a child. “Safety plugs” may also be used if they cannot be easily removed from outlets by children and do not pose a choking risk.

5.2.4.4 Location of Electrical Devices near Water
No electrical device or apparatus accessible to children should be located so it could be plugged into an electrical outlet while a person is in contact with a water source, such as a sink, tub, shower area, water table, or swimming pool.

5.2.8.1 Integrated Pest Management
Programs should adopt an integrated pest management program to ensure long-term, environmentally sound pest suppression through a range of practices including pest exclusion, sanitation and clutter control, and elimination of conditions that are conducive to pest infestations.

5.2.9.1 Use and Storage of Toxic Substances
All toxic substances should be inaccessible to children and should not be used when children are present. Toxic substances should be used as recommended by the manufacturer and stored in the original labeled containers. The telephone number for the poison control center should be posted and readily accessible in emergency situations.

5.2.9.5 Carbon Monoxide Detectors
Programs should meet state or local laws regarding carbon monoxide detectors, including circumstances when detectors are necessary. Detectors should be tested monthly, and testing should be documented. Batteries should be changed at least yearly. Detectors should be replaced according to the manufacturer’s instructions.

5.3.1.1/5.5.0.6/5.5.0.7 Safety of Equipment, Materials, and Furnishings
Equipment, materials, furnishings, and play areas should be sturdy, safe, in good repair, and meet the recommendations of the CPSC. Programs should attend to, including, but not limited to, the following safety hazards:
   a) Openings that could entrap a child’s head or limbs;
b) Elevated surfaces that are inadequately guarded;
c) Lack of specified surfacing and fall zones under and around climbable equipment;
d) Mismatched size and design of equipment for the intended users;
e) Insufficient spacing between equipment;
f) Tripping hazards;
g) Components that can pinch, sheer, or crush body tissues;
h) Equipment that is known to be of a hazardous type;
i) Sharp points or corners;
j) Splinters;
k) Protruding nails, bolts, or other parts that could entangle clothing or snag skin;
l) Loose, rusty parts;
m) Hazardous small parts that may become detached during normal use or reasonably foreseeable abuse of the equipment and that present a choking, aspiration, or ingestion hazard to a child;
n) Strangulation hazards (e.g., straps, strings, etc.);
o) Flaking paint;
p) Paint that contains lead or other hazardous materials; and
q) Tip-over hazards, such as chests, bookshelves, and televisions.

Plastic bags that are large enough to pose a suffocation risk as well as matches, candles, and lighters should not be accessible to children.

5.3.1.12 Availability and Use of a Telephone or Wireless Communication Device
The facility should provide at all times at least one working non-pay telephone or wireless communication device for general and emergency use on the premises of the child care program, in each vehicle used when transporting children, and on field trips. While transporting children, drivers should not operate a motor vehicle while using a mobile telephone or wireless communications device when the vehicle is in motion or traffic.

5.4.5.2 Cribs and Play Yards

Programs should only use cribs for sleep purposes and ensure that each crib is a safe sleep environment as defined by the American Academy of Pediatrics. Each crib should be labeled and used for the infant's exclusive use. Cribs and mattresses should be thoroughly cleaned and sanitized before assignment for use by another child. Infants should not be placed in the cribs with items that could pose a strangulation or suffocation risk. Cribs should be placed away from window blinds or draperies.
5.5.0.8 Firearms
Center-based programs should not have firearms or any other weapon on the premises at any time. If present in a family child care home, parents should be notified and these items should be unloaded, equipped with child protective devices, and kept under lock and key with the ammunition locked separately in areas inaccessible to the children. Parents/guardians should be informed about this policy.

5.6.0.1: First Aid and Emergency Supplies
The facility should maintain up-to-date first aid and emergency supplies in each location in which children are cared. The first aid kit or supplies should be kept in a closed container, cabinet, or drawer that is labeled and stored in a location known to all staff, accessible to staff at all times, but locked or otherwise inaccessible to children. When children leave the facility for a walk or to be transported, a designated staff member should bring a transportable first aid kit. In addition, a transportable first aid kit should be in each vehicle that is used to transport children to and from the program. First aid kits or supplies should be restocked after each use.

Play Areas/Playgrounds and Transportation

6.1.0.6/6.1.0.8/6.3.1.1 Location of Play Areas near Bodies of Water/ Enclosures for Outdoor Play Areas/Enclosure of Bodies of Water
The outdoor play area should be enclosed with a fence or natural barriers. Fences and barriers should not prevent the supervision of children by caregivers/teachers. If a fence is used, it should be in good condition and conform to applicable local building codes in height and construction. These areas should have at least two exits, with at least one being remote from the buildings.

Gates should be equipped with self-closing and positive self-latching closure mechanisms that are high enough or of a type such that children cannot open it. The openings in the fence and gates should be no larger than 3 ½ inches. The fence and gates should be constructed to discourage climbing. Outside play areas should be free from unsecured bodies of water. If present, all water hazards should be inaccessible to unsupervised children and enclosed with a fence that is 4 to 6 feet high or higher and comes within 3 ½ inches of the ground.

6.2.3.1 Prohibited Surfaces for Placing Climbing Equipment
Equipment used for climbing should not be placed over, or immediately next to, hard surfaces not intended for use as surfacing for climbing equipment. All pieces of playground equipment should be placed over a shock-absorbing material that is either the unitary or the loose-fill type extending beyond the perimeter of the stationary equipment. Organic materials that support colonization of molds and bacteria should not be used. This standard applies whether the equipment is installed outdoors or indoors. Programs should follow CPSC guidelines and ASTM International Standards F1292-13 and F2223-10.
6.2.5.1 Inspection of Indoor and Outdoor Play Areas and Equipment
The indoor and outdoor play areas and equipment should be inspected daily for basic health and safety, including, but not limited to:
   a) Missing or broken parts;
   b) Protrusion of nuts and bolts;
   c) Rust and chipping or peeling paint;
   d) Sharp edges, splinters, and rough surfaces;
   e) Stability of handholds;
   f) Visible cracks;
   g) Stability of non-anchored large play equipment (e.g., playhouses);
   h) Wear and deterioration
   i) Vandalism or trash

Any problems should be corrected before the playground is used by children.

6.3.2.1 Lifesaving Equipment
Each swimming pool more than six feet in width, length, or diameter should be provided with a ring buoy and rope, a rescue tube, or a throwing line and a shepherd's hook that will not conduct electricity. This equipment should be long enough to reach the center of the pool from the edge of the pool, kept in good repair, and stored safely and conveniently for immediate access. Caregivers/teachers should be trained on the proper use of this equipment. Children should be familiarized with the use of the equipment based on their developmental level.

6.3.5.2 Water in Containers
Bath tubs, buckets, diaper pails, and other open containers of water should be emptied immediately after use.

6.5.1.2 Qualifications for Drivers
In addition to meeting the general staff background check standards, any driver or transportation staff member who transports children for any purpose should have:
   a) A valid driver's license that authorizes the driver to operate the type of vehicle being driven;
   b) A safe driving record for more than 5 years, with no crashes where a citation was issued, as evidenced by the state Department of Motor Vehicles records;
   c) No use of alcohol, drugs, or any substance that could impair abilities before or while driving;
   d) No tobacco use while driving;
   e) No medical condition that would compromise driving, supervision, or evacuation capability;
   f) Valid pediatric CPR and first aid certificate if transporting children alone.

The driver's license number and date of expiration, vehicle insurance information, and verification of current state vehicle inspection should be on file in the facility.
6.5.2.2 Child Passenger Safety
When children are driven in a motor vehicle other than a bus, all children should be transported only if they are restrained in a developmentally appropriate car safety seat, booster seat, seat belt, or harness that is suited to the child’s weight and age in accordance with state and federal laws and regulations. The child should be securely fastened, according to the manufacturer's instructions. The child passenger restraint system should meet the federal motor vehicle safety standards contained in 49 CFR 571.213 and carry notice of compliance. Child passenger restraint systems should be installed and used in accordance with the manufacturer's instructions and should be secured in back seats only.

Car safety seats should be replaced if they have been recalled, are past the manufacturer’s “date of use” expiration date, or have been involved in a crash that meets the U.S. Department of Transportation crash severity criteria or the manufacturer's criteria for replacement of seats after a crash.

If the program uses a vehicle that meets the definition of a school bus and the school bus has safety restraints, the following should apply:
   a) The school bus should accommodate the placement of wheelchairs with four tie-downs affixed according to the manufactures’ instructions in a forward-facing direction;
   b) The wheelchair occupant should be secured by a three-point tie restraint during transport;
   c) At all times, school buses should be ready to transport children who must ride in wheelchairs;
   d) Manufacturers’ specifications should be followed to assure that safety requirements are met.

6.5.2.4 Interior Temperature of Vehicles
The interior of vehicles used to transport children for field trips and out-of-program activities should be maintained at a temperature comfortable to children. All vehicles should be locked when not in use, head counts of children should be taken before and after transporting to prevent a child from being left in a vehicle, and children should never be left in a vehicle unattended.

6.5.3.1 Passenger Vans
Early care and education programs that provide transportation for any purpose to children, parents/guardians, staff, and others should not use 15-passenger vans when avoidable.

Infectious Disease

7.2.0.1 Immunization Documentation
Programs should require that all parents/guardians of enrolled children provide written documentation of receipt of immunizations appropriate for each child's age. Infants, children, and adolescents should be immunized as specified in the “Recommended Immunization Schedules for Persons Aged 0 Through 18 Years,” developed by the Advisory Committee on
Immunization Practices of the CDC, the American Academy of Pediatrics, and the American Academy of Family Physicians. Children whose immunizations are not up-to-date or have not been administered according to the recommended schedule should receive the required immunizations, unless contraindicated or for legal exemptions.

7.2.0.2 Unimmunized Children

If immunizations have not been or are not to be administered because of a medical condition, a statement from the child's primary health care provider documenting the reason why the child is temporarily or permanently medically exempt from the immunization requirements should be on file. If immunizations are not to be administered because of the parents'/guardians' religious or philosophical beliefs, a legal exemption with notarization, waiver, or other state-specific required documentation signed by the parent/guardian should be on file. Parents/guardians of an enrolling or enrolled infant who has not been immunized due to the child’s age should be informed if/when there are children in care who have not had routine immunizations due to exemption.

The parent/guardian of a child who has not received the age-appropriate immunizations prior to enrollment and who does not have documented medical, religious, or philosophical exemptions from routine childhood immunizations should provide documentation of a scheduled appointment or arrangement to receive immunizations. Children who are in foster care or experiencing homelessness as defined by the McKinney Vento Act should receive services while parents/guardians are taking necessary actions to comply with immunization requirements of the program. An immunization plan and catch-up immunizations should be initiated upon enrollment and completed as soon as possible. If a vaccine-preventable disease to which children are susceptible occurs and potentially exposes the unimmunized children who are susceptible to that disease, the health department should be consulted to determine whether these children should be excluded for the duration of possible exposure or until the appropriate immunizations have been completed. The local or state health department will be able to provide guidelines for exclusion requirements.

7.2.0.3 Immunization of Caregivers/Teachers

Caregivers/teachers should be current with all immunizations routinely recommended for adults by the Advisory Committee on Immunization Practices (ACIP) of the Centers for Disease Control and Prevention (CDC) as shown in the “Recommended Adult Immunization Schedule” in the following categories:

a) Vaccines recommended for all adults who meet the age requirements and who lack evidence of immunity (i.e., lack documentation of vaccination or have no evidence of prior infection); and

b) Recommended if a specific risk factor is present.

If a staff member is not appropriately immunized for medical, religious, or philosophical reasons, the program should require written documentation of the reason. If a vaccine-preventable disease to which adults are susceptible occurs in the facility and potentially exposes the unimmunized adults who are susceptible to that disease, the health department
should be consulted to determine whether these adults should be excluded for the duration of possible exposure or until the appropriate immunizations have been completed. The local or state health department will be able to provide guidelines for exclusion requirements.

Policies

9.2.4.1 Written Plan and Training for Handling Urgent Medical Care or Threatening Incidents
The program should have a written plan for reporting and managing any incident or unusual occurrence that is threatening to the health, safety, or welfare of the children, staff, or volunteers. Caregiver/teacher and staff training procedures should also be included. The management, documentation, and reporting of the following types of incidents should be addressed:
   a) Lost or missing child;
   b) Suspected maltreatment of a child (also see state's mandates for reporting);
   c) Suspected sexual, physical, or emotional abuse of staff, volunteers, or family members occurring while they are on the premises of the program;
   d) Injuries to children requiring medical or dental care;
   e) Illness or injuries requiring hospitalization or emergency treatment;
   f) Mental health emergencies;
   g) Health and safety emergencies involving parents/guardians and visitors to the program;
   h) Death of a child or staff member, including a death that was the result of serious illness or injury that occurred on the premises of the early care and education program, even if the death occurred outside of early care and education hours;
   i) The presence of a threatening individual who attempts or succeeds in gaining entrance to the facility.

9.2.4.3/9.2.4.5 Disaster Planning, Training and Communication/Emergency and Evacuation Drills
Early care and education programs should consider how to prepare for and respond to emergency situations or natural disasters that may require evacuation, lock-down, or shelter-in-place and have written plans, accordingly. Written plans should be posted in each classroom and areas used by children. The following topics should be addressed, including but not limited to regularly scheduled practice drills, procedures for notifying and updating parents, and the use of the daily class roster(s) to check attendance of children and staff during an emergency or drill when gathered in a safe space after exit and upon return to the program. All drills/exercises should be recorded.

9.2.4.7 Sign-In/Sign-Out System
Programs should have a sign-in/sign-out system to track those who enter and exit the facility. The system should include name, contact number, relationship to facility (e.g., parent/guardian, vendor, guest, etc.), and recorded time in and out.

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3 Family Child Care is exempt.
9.2.4.8 Authorized Persons to Pick Up Child
Children may only be released to adults authorized by parents or legal guardians whose identity has been verified by photo identification. Names, addresses, and telephone numbers of persons authorized to pick up child should be obtained during the enrollment process and regularly reviewed, along with clarification/documentation of any custody issues/court orders. The legal guardian(s) of the child should be established and documented at this time.

9.4.1.12 Record of Valid License, Certificate, or Registration of Facility or Family Child Care Home
Every facility and/or child care home should hold a valid license, certificate, or documentation of registration prior to operation as required by the local and/or state statute.

9.4.2.1 Contents of Child Records
Programs should maintain a confidential file for each child in one central location on-site and should be immediately available to the child's caregivers/teachers (who should have parental/guardian consent for access to records), the child's parents/guardians, and the licensing authority upon request. The file for each child should include the following:
   a) Pre-admission enrollment information;
   b) Admission agreement signed by the parent/guardian at enrollment;
   c) Initial and updated health care assessments, completed and signed by the child's primary care provider, based on the child's most recent well care visit;
   d) Health history completed by the parent/guardian at admission;
   e) Medication record;
   f) Authorization form for emergency medical care;
   g) Results of developmental and behavioral screenings;
   h) Record of persons authorized to pick up child;
   i) Written informed consent forms signed by the parent/guardian allowing the facility to share the child's health records with other service providers.

10.4.2.1 Frequency of Inspections for Child Care Centers and Family Child Care Homes
Licensing inspectors or monitoring staff should make on-site inspections to measure program compliance with health, safety, and fire standards prior to issuing an initial license and no less than one, unannounced inspection each year thereafter to ensure compliance with regulations. Additional inspections should take place if needed for the program to achieve satisfactory compliance or if the program is closed at any time. The number of inspections should not include those inspections conducted for the purpose of investigating complaints. Complaints should be investigated promptly, based on severity of the complaint. States should post results of licensing inspections, including complaints, on the internet for parent and public review. Parents/guardians should have easy access to licensing rules and made aware of how to report complaints to the licensing agency.

Sufficient numbers of licensing inspectors should be qualified to inspect early care and education programs and trained in related health and safety requirements among other requirements of the State licensure.
Resources Consulted in Development


Stepping Stones to Caring for Our Children:

National Health and Safety Performance Standards; Guidelines for Early Care and Education Programs,

Third Edition

PROTECTING CHILDREN FROM HARM
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New research and/or evolving best practices may warrant a standard to be updated or changed. Please refer to the online version of Stepping Stones, 3rd Edition (http://www.nrckids.org/spinoff/steppingstones/index.htm) for the most current standard language. You may also look up individual standards at http://www.cfoc.nrckids.org/
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This project was supported by Grant Number U46MCO9810 from the U.S. Department of Health and Human Services, Health Resources and Services Administration, Maternal and Child Health Bureau.

Stepping Stones, Third Edition (SS3) is for reference purposes only and should not be used as a substitute for medical or legal consultation, nor be used to authorize actions beyond a person’s licensing, training, or ability.

Availability

The full texts of Stepping Stones to Caring for Our Children, Third Edition and Caring for Our Children: National Health and Safety Performance Standards; Guidelines for Early Care and Education Programs, Third Edition are available online through the National Resource Center for Health and Safety in Child Care and Early Education website (http://nrckids.org/CFOC3/index.html).

Print copies of the comprehensive source document Caring for Our Children, Third Edition are available from the American Academy of Pediatrics (http://www.aap.org) and the American Public Health Association (http://www.apha.org/publications/bookstore/).
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ACKNOWLEDGEMENTS

The American Academy of Pediatrics (AAP)*, the American Public Health Association (APHA), and the National Resource Center for Health and Safety in Child Care and Early Education (NRC) would like to acknowledge the outstanding contributions of all persons and organizations involved in the revision of Stepping Stones to Caring for Our Children, Third Edition (SS3). The collaboration of the American Academy of Pediatrics (AAP), the American Public Health Association (APHA), and the U.S. Department of Health and Human Services, Health Resources and Services Administration, Maternal and Child Health Bureau (MCHB) provided a wide scope of technical expertise from their constituents in the creation of this project. The subject-specific Technical Panels provided the majority of the content review and resources. More than 35 organizations and 120 individuals reviewed and validated the accuracy of the content and contributed additional expertise where applicable. See Contributors to the Development of Stepping Stones, Third Edition on page 132 for a listing of the Technical Panel Chairs, Panel Members, individuals, and representatives of organizations who gave valuable input. This broad collaboration and review from the best minds in the field has led to a comprehensive and useful tool. We would like to acknowledge those individuals and those whose names may have been omitted. Our sincere appreciation goes to all of our colleagues who willingly gave their time and expertise to the development of this resource.

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* For a list of acronyms frequently used in this document, please refer to page xiv.
INTRODUCTION

Every day millions of children attend early care and education programs. It is critical that they have the opportunity to grow and learn in healthy and safe environments with caring and professional caregivers/teachers. Following health and safety best practices is an important way to provide quality early care and education for young children. Caring for Our Children: National Health and Safety Performance Standards; Guidelines for Early Care and Education Programs, Third Edition (CFOC3) and its companion document, Stepping Stones, Third Edition (SS3) were created to advance the quality and safety of child care and early education.

History and Purpose

In 1992, the American Public Health Association (APHA) and the American Academy of Pediatrics (AAP) developed and published the first edition of CFOC, which was recognized by the early childhood field as the leading set of national standards for health and safety in child care programs. Subsequently, in 1997, Stepping Stones was developed by AAP, APHA, and NRC to identify a subset of standards in CFOC that, when practiced, could prevent serious harm and injury to children in child care settings and serve as a companion piece to CFOC. (See Advice to Users on page xv for information on intended audiences and uses).

Since that time, second editions of CFOC and Stepping Stones were released in 2002 and 2003, respectively. Now a new, third edition of Stepping Stones based on CFOC3 (released in 2011) has been produced by AAP, APHA, and NRC, supported by Grant Number U46MCO9810 from the U.S. Department of Health and Human Services, Health Resources and Services Administration, Maternal and Child Health Bureau. Stepping Stones, Third Edition (SS3) is the collection of selected CFOC3 standards which, when put into practice, are most likely to prevent serious adverse outcomes in child care and early education settings.

Adverse outcomes are defined as harm resulting from failure to practice the recommendations in the CFOC3 standards. These harmful results may include frequent or severe disease or injury, disability or death (morbidity and mortality). They could occur immediately or later in the child’s life as a result of repeated failure to follow the recommended practices (i.e., cumulative impact leading to poor health or developmental outcomes long term).

Methodology of Stepping Stones, Third Edition

The SS3 development process was initiated in 2012 and completed in 2013 to reflect the new and revised CFOC3 standards. More than 120 national health and safety experts and child care specialists contributed their expertise in either rating the CFOC3 standards to be included in the third National Health and Safety Performance Standards...
edition of *Stepping Stones* or reviewing the drafts of the book (see list of contributors beginning on page 132). From the 686 standards in *CFOC3*, 138 of them were selected for inclusion in SS3. There are fewer standards in SS3 than there were in SS2. Please see page 138 for a more detailed description of the SS3 methodology and the reasoning behind the reduction in number.

**Acronyms Frequently Used in this Document**

<table>
<thead>
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ADVICE TO USERS

Intended Audiences and Uses

Stepping Stones, Third Edition was developed to be used by multiple audiences to prevent harm and adverse outcomes in children in all early care and education environments:

- **Caregivers/Teachers/Directors** can use the standards to develop and implement sound practices, policies, and staff training to ensure that their program is healthy, safe, and age-appropriate for all children in their care.

- **Early Childhood Systems** can integrate health and safety components into their efforts to promote optimal health and development for all children.

- **Families** can use information from the standards to select quality programs and/or evaluate their child’s current early care and education program. They can work in partnership with caregivers/teachers in promoting healthy and safe behavior and practice for their child and family. Families also may want to incorporate many of these healthy and safe practices at home.

- **Health Care Professionals** can assist families and can provide consultation for caregivers/teachers by using the standards as guidance on what makes a healthy, safe, and age-appropriate environment that encourages children’s development of beneficial habits. Child care health consultants can use the standards to develop guidance materials to share with both caregivers/teachers and parents/guardians.

- **Licensing Professionals/Regulators** can use the evidence-based rationale to develop or improve regulations that require a healthy and safe learning environment at a critical time in a child’s life and develop lifelong healthy behaviors in children.

- **Organizations that will update standards** for accreditation or guidance purposes for a special discipline can draw on the new work and rationales of the third edition just as Caring for Our Children’s expert contributors drew upon the expertise of these organizations in developing the new standards.

- **Policy-Makers** can use the strong science and rationale to create and promote sound policy that supports children’s development of lifelong healthy behaviors and lifestyles.

- **State Departments of Education (DOEs) and local school administrations** can use the standards to guide the writing of National Health and Safety Performance Standards.
standards and policy for school-operated child care and preschool and Pre-K programs, and this guidance will help principals to implement good practice in early care and education programs.

- States and localities who fund subsidized care and services for income-eligible families can use the standards to determine the level and quality of service to be expected.

- University/College Faculty can instruct and model for their students the best practices for health and safety to use with young children upon entering the early childhood workplace. In addition, students will be able to demonstrate the transfer of the latest research into practice.

**Types of Facilities**

Several types of facilities are covered by the general definition of child care and early education. The definitions provided here are used consistently in both CFOC3 and SS3 to describe three types of out-of-home child care settings. When using these definitions, please be aware that they may be different than what the reader’s state licensing agency uses. States vary greatly in their legal definitions for different types of child care facilities, which can cause some confusion when comparing regulations across states and within SS3. The general definitions used in CFOC3 and SS3 are:

- **A Small family child care home** provides care and education of one to six children, including the caregiver’s/teacher’s own children in the home of the caregiver/teacher. Family members or other helpers may be involved in assisting the caregiver/teacher, but often, there is only one caregiver/teacher present at any one time.

- **A Large family child care home** provides care and education of seven to twelve children, including the caregiver’s/teacher’s own children in the home of the caregiver/teacher, with one or more qualified adult assistants to meet the child:staff ratio requirements.

- **A Center** is a facility that provides care and education to any number of children in a nonresidential setting, or thirteen or more children in any setting if the facility is open on a regular basis.

**NOTE:** Unless otherwise noted beneath the standard text, the standards in SS3 are applicable to all three types of facilities.

**Format and Organization**

The 686 standards in CFOC3 are numbered according to the chapter in which they are located. The 138 standards included in Stepping Stones, Third Edition retain their numbers from CFOC3 to assist users in comparing...
the two documents. Chapter titles and associated numbering are shown in the following table.

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</table>

Stepping Stones, Third Edition presents the Standard only, whereas the larger document, CFOC3, also includes the Rationale, Comments, Facility Type, Related Standards, and References for each standard. To review the Rationale, Comments, Related Standards, and References of a standard contained in Stepping Stones, Third Edition, users should consult a print version of CFOC3 or search the online version located on the NRC’s website (http://cfoc.nrckids.org). Also, there are standards from CFOC3 that are referred to in Stepping Stones, Third Edition but were not selected for inclusion. Users should consult CFOC3 for their wording.

The following significant content and format changes and additions were made in this new edition:

- New and updated standards include safe sleep, handling and feeding of human milk, introduction of solid foods to infants, monitoring children’s development, unimmunized children, preventing expulsions, and availability of drinking water.
- Conversion charts to locate standards in SS2 and their new numbering in SS3 and vice versa.
Interactive Online Use of Stepping Stones PDF Version

The online PDF version of this document contains links that enable you to interactively navigate within the document and locate additional information from the CFOC3 database. For example:

- To go to a standard in SS3 from the Table of Contents, click on the standard number in the Table of Contents;

```
2.1.4 - Monitoring Children’s Development/Obtaining Consent for Screening .......................................................... 2.1.2.1 - Personal Caregiver/Teacher Relationships for Infants and Toddlers ..........................................................
```

- To go to a section of SS3 from the Table of Contents, click on the section title in the Table of Contents;

```
Acknowledgements ..................................................................
Introduction ..........................................................................
Advice to Users .....................................................................
Chapter 1 – Staffing .............................................................
```

- To go to an appendix in SS3 from the Table of Contents, click on the section title in the Table of Contents;

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Appendix 0 Care Plan for Children with Special Health Needs...
Appendix 1 SS3 Methodology ....................................................
```

- To go to an appendix in SS3 from within a standard, click on the appendix reference in the standard text.

```
In addition to Orientation Training, Standard 1.4.2.1, the orientation provided to staff in child care facilities should be based on the special health care needs of children who will be assigned to their care. All staff oriented for care of children with special health needs should be knowledgeable about the care plans created by the child’s primary care provider in their medical home as well as any care plans created by other health professionals and therapists involved in the child’s care. A care plan for children with special health care needs can be found in Appendix 0. Child care health consultants can be an excellent resource for providing health and safety orientation or referrals to resources for such training. This training may include, but is not limited to, the following topics:
```

- To view all the additional parts of a standard that are not included in SS3 such as the rationale, comments, etc., click on the standard title on the page where the standard text is located in this document. If you have internet access, this link will take you to the standard in the CFOC3 database. From the database you can also link to related standards and appendices.

National Health and Safety Performance Standards
Standard 1.4.3.1 First Aid and CPR Training for Staff
The director of a center or a large family child care home and the caregiver/teacher in a small family child care home should ensure all staff members involved in providing direct care have documentation of satisfactory completion of training in pediatric first aid and pediatric CPR skills. Pediatric CPR skills should be taught by demonstration, practice, and return demonstration to ensure the technique can be performed in an emergency. These skills should be current according to the requirement specified for retraining by the organization that provided the training.

Want more? To explore all the standards in CFOC3 that cover any topic of interest, search the online CFOC3 database at http://cfoc.nrckids.org.

Stepping Stones, Third Edition (SS3) is for reference purposes only and should not be used as a substitute for medical or legal consultation, nor be used to authorize actions beyond a person’s licensing, training, or ability.
Chapter 1: Staffing

Standard 1.1.1.1 Ratios for Small Family Child Care Homes

The small family child care home caregiver/teacher child:staff ratios should conform to the following table:

<table>
<thead>
<tr>
<th>Type of Facility</th>
<th>Maximum Child:Staff Ratio</th>
<th>Maximum Group Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>≤ 12 months</td>
<td>2:1</td>
<td>6</td>
</tr>
<tr>
<td>13-23 months</td>
<td>2:1</td>
<td>8</td>
</tr>
<tr>
<td>24-35 months</td>
<td>3:1</td>
<td>12</td>
</tr>
<tr>
<td>3-year-olds</td>
<td>7:1</td>
<td>12</td>
</tr>
<tr>
<td>4 to 5-year-olds</td>
<td>8:1</td>
<td>12</td>
</tr>
<tr>
<td>6 to 8-year-olds</td>
<td>10:1</td>
<td>12</td>
</tr>
<tr>
<td>9 to 12-year-olds</td>
<td>12:1</td>
<td>12</td>
</tr>
</tbody>
</table>

The small family child care home caregiver's/teacher's own children as well as any other children in the home temporarily requiring supervision should be included in the child:staff ratio. During nap time, at least one adult should be physically present in the same room as the children.

TYPE OF FACILITY: Small Family Child Care Homes

Standard 1.1.1.2 Ratios for Large Family Child Care Homes and Centers

Child:staff ratios in large family child care homes and centers should be maintained as follows during all hours of operation, including in vehicles during transport.

<table>
<thead>
<tr>
<th>Age</th>
<th>Maximum Child:Staff Ratio</th>
<th>Maximum Group Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>≤ 12 months</td>
<td>2:1</td>
<td>6</td>
</tr>
<tr>
<td>13-23 months</td>
<td>2:1</td>
<td>8</td>
</tr>
<tr>
<td>24-35 months</td>
<td>3:1</td>
<td>12</td>
</tr>
<tr>
<td>3-year-olds</td>
<td>7:1</td>
<td>12</td>
</tr>
<tr>
<td>4 to 5-year-olds</td>
<td>8:1</td>
<td>12</td>
</tr>
<tr>
<td>6 to 8-year-olds</td>
<td>10:1</td>
<td>12</td>
</tr>
<tr>
<td>9 to 12-year-olds</td>
<td>12:1</td>
<td>12</td>
</tr>
</tbody>
</table>
During nap time for children birth through thirty months of age, the child:staff ratio must be maintained at all times regardless of how many infants are sleeping. They must also be maintained even during the adult’s break time so that ratios are not relaxed.

### Child Care Centers

<table>
<thead>
<tr>
<th>Age</th>
<th>Maximum Child:Staff Ratio</th>
<th>Maximum Group Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>≤ 12 months</td>
<td>3:1</td>
<td>6</td>
</tr>
<tr>
<td>13-35 months</td>
<td>4:1</td>
<td>8</td>
</tr>
<tr>
<td>3-year-olds</td>
<td>7:1</td>
<td>14</td>
</tr>
<tr>
<td>4-year-olds</td>
<td>8:1</td>
<td>16</td>
</tr>
<tr>
<td>5-year-olds</td>
<td>8:1</td>
<td>16</td>
</tr>
<tr>
<td>6 to 8-year-olds</td>
<td>10:1</td>
<td>20</td>
</tr>
<tr>
<td>9 to 12-year-olds</td>
<td>12:1</td>
<td>24</td>
</tr>
</tbody>
</table>

During nap time for children ages thirty-one months and older, at least one adult should be physically present in the same room as the children and maximum group size must be maintained. Children over thirty-one months of age can usually be organized to nap on a schedule, but infants and toddlers as individuals are more likely to nap on different schedules. In the event even one child is not sleeping the child should be moved to another activity where appropriate supervision is provided.

If there is an emergency during nap time other adults should be on the same floor and should immediately assist the staff supervising sleeping children. The caregiver/teacher who is in the same room with the children should be able to summon these adults without leaving the children.

When there are mixed age groups in the same room, the child:staff ratio and group size should be consistent with the age of most of the children. When infants or toddlers are in the mixed age group, the child:staff ratio and group size for infants and toddlers should be maintained. In large family child care homes with two or more caregivers/teachers caring for no more than twelve children, no more than three children younger than two years of age should be in care.

Children with special health care needs or who require more attention due to certain disabilities may require additional staff on-site, depending on their special needs and the extent of their disabilities (1). See Standard 1.1.1.3.

At least one adult who has satisfactorily completed a course in pediatric first aid, including CPR skills within the past three years, should be part of the ratio at all times.

**TYPE OF FACILITY:** Center, Large Family Child Care Home

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1. See Standard 1.1.1.3.
**Standard 1.1.1.3 Ratios for Facilities Serving Children with Special Health Care Needs and Disabilities**

Facilities enrolling children with special health care needs and disabilities should determine, by an individual assessment of each child’s needs, whether the facility requires a lower child:staff ratio.

**Standard 1.1.1.4 Ratios and Supervision During Transportation**

Child:staff ratios established for out-of-home child care should be maintained on all transportation the facility provides or arranges. Drivers should not be included in the ratio. No child of any age should be left unattended in or around a vehicle, when children are in a car, or when they are in a car seat. A face-to-name count of children should be conducted prior to leaving for a destination, when the destination is reached, before departing for return to the facility and upon return. Caregivers/teachers should also remember to take into account in this head count if any children were picked up or dropped off while being transported away from the facility.

**TYPE OF FACILITY:** Center, Large Family Child Care Home

**Standard 1.1.1.5 Ratios and Supervision for Swimming, Wading, and Water Play**

The following child:staff ratios should apply while children are swimming, wading, or engaged in water play:

<table>
<thead>
<tr>
<th>Developmental Levels</th>
<th>Child:Staff Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Infants</td>
<td>1:1</td>
</tr>
<tr>
<td>Toddlers</td>
<td>1:1</td>
</tr>
<tr>
<td>Preschoolers</td>
<td>4:1</td>
</tr>
<tr>
<td>School-age Children</td>
<td>6:1</td>
</tr>
</tbody>
</table>

Constant and active supervision should be maintained when any child is in or around water (4). During any swimming/wading/water play activities where either an infant or a toddler is present, the ratio should always be one adult to one infant/toddler. The required ratio of adults to older children should be met without including the adults who are required for supervision of infants and/or toddlers. An adult should remain in direct physical contact with an infant at all times during swimming or water play (4). Whenever children thirteen months and up to five years of age are in or around water, the supervising adult should be within an arm’s length providing “touch supervision” (6). The attention of an adult who is supervising children of any age should be focused on the child, and the adult should never be engaged
in other distracting activities (4), such as talking on the telephone, socializing, or tending to chores.

A lifeguard should not be counted in the child:staff ratio.

**Standard 1.2.0.2 Background Screening**

Directors of centers and caregivers/teachers in large and small family child care homes should conduct a complete background screening before employing any staff member (including substitutes, cooks, clerical staff, transportation staff, bus drivers, or custodians who will be on the premises or in vehicles when children are present). The background screening should include:

a. Name and address verification;
b. Social Security number verification;
c. Education verification;
d. Employment history;
e. Alias search;
f. Driving history through state Department of Motor Vehicles records;
g. Background screening of:
   1. State and national criminal history records;
   2. Child abuse and neglect registries;
   3. Licensing history with any other state agencies (i.e., foster care, mental health, nursing homes, etc.);
   4. Fingerprints; and
   5. Sex offender registries;
h. Court records;
i. References.

All family members over age ten living in large and small family child care homes should also have background screenings.

Drug tests may also be incorporated into the background screening. Written permission to obtain the background screening (with or without a drug screen) should be obtained from the prospective employee. Consent to the background investigation should be required for employment consideration.

When checking references and when conducting employee or volunteer interviews, prospective employers should specifically ask about previous convictions and arrests, investigation findings, or court cases with child abuse/neglect or child sexual abuse. Failure of the prospective employee to disclose previous history of child abuse/neglect or child sexual abuse is grounds for immediate dismissal.

Persons should not be hired or allowed to work or volunteer in the child care facility if they acknowledge being sexually attracted to children or having
physically or sexually abused children, or are known to have committed such acts.

Background screenings should be repeated periodically taking into consideration state laws and/or requirements. Screenings should be repeated more frequently if there are additional concerns.

**Standard 1.3.1.1 General Qualifications of Directors**

The director of a center enrolling fewer than sixty children should be at least twenty-one-years-old and should have all the following qualifications:

a. Have a minimum of a Baccalaureate degree with at least nine credit-bearing hours of specialized college-level course work in administration, leadership, or management, and at least twenty-four credit-bearing hours of specialized college-level course work in early childhood education, child development, elementary education, or early childhood special education that addresses child development, learning from birth through kindergarten, health and safety, and collaboration with consultants OR documents meeting an appropriate combination of relevant education and work experiences (6);

b. A valid certificate of successful completion of pediatric first aid that includes CPR;

c. Knowledge of health and safety resources and access to education, health, and mental health consultants;

d. Knowledge of community resources available to children with special health care needs and the ability to use these resources to make referrals or achieve interagency coordination;

e. Administrative and management skills in facility operations;

f. Capability in curriculum design and implementation, ensuring that an effective curriculum is in place;

g. Oral and written communication skills;

h. Certificate of satisfactory completion of instruction in medication administration;

i. Demonstrated life experience skills in working with children in more than one setting;

j. Interpersonal skills;

k. Clean background screening.

Knowledge about parenting training/counseling and ability to communicate effectively with parents/guardians about developmental-behavioral issues, child progress, and in creating an intervention plan beginning with how the center will address challenges and how it will help if those efforts are not effective.

The director of a center enrolling more than sixty children should have the above and at least three years experience as a teacher of children in the age
group(s) enrolled in the center where the individual will act as the director, plus at least six months experience in administration.

**TYPE OF FACILITY:** Center

**Standard 1.3.2.2 Qualifications of Lead Teachers and Teachers**

Lead teachers and teachers should be at least twenty-one years of age and should have at least the following education, experience, and skills:

a. A Bachelor’s degree in early childhood education, school-age care, child development, social work, nursing, or other child-related field, or an associate’s degree in early childhood education and currently working towards a bachelor’s degree;

b. A minimum of one year on-the-job training in providing a nurturing indoor and outdoor environment and meeting the child’s out-of-home needs;

c. One or more years of experience, under qualified supervision, working as a teacher serving the ages and developmental abilities of the children in care;

d. A valid certificate in pediatric first aid, including CPR;

e. Thorough knowledge of normal child development and early childhood education, as well as knowledge of indicators that a child is not developing typically;

f. The ability to respond appropriately to children’s needs;

g. The ability to recognize signs of illness and safety/injury hazards and respond with prevention interventions;

h. Oral and written communication skills;

i. Medication administration training (8).

Every center, regardless of setting, should have at least one licensed/certified lead teacher (or mentor teacher) who meets the above requirements working in the child care facility at all times when children are in care.

Additionally, facilities serving children with special health care needs associated with developmental delay should employ an individual who has had a minimum of eight hours of training in inclusion of children with special health care needs.

**TYPE OF FACILITY:** Center

**Standard 1.3.3.1 General Qualifications of Family Child Care Caregivers/Teachers to Operate a Family Child Care Home**

All caregivers/teachers in large and small family child care homes should be at least twenty-one years of age, hold an official credential as granted by
the authorized state agency, meet the general requirements specified in Standard 1.3.2.4 through Standard 1.3.2.6, based on ages of the children served, and those in Section 1.3.3, and should have the following education, experience, and skills:

a. Current accreditation by the National Association for Family Child Care (NAFCC) (including entry-level qualifications and participation in required training) and a college certificate representing a minimum of three credit hours of early childhood education leadership or master caregiver/teacher training or hold an Associate’s degree in early childhood education or child development;

b. A provider who has been in the field less than twelve months should be in the self-study phase of NAFCC accreditation;

c. A valid certificate in pediatric first aid, including CPR;

d. Pre-service training in health management in child care, including the ability to recognize signs of illness, knowledge of infectious disease prevention and safety injury hazards;

e. If caring for infants, knowledge on safe sleep practices including reducing the risk of sudden infant death syndrome (SIDS) and prevention of shaken baby syndrome/abusive head trauma (including how to cope with a crying infant);

f. Knowledge of normal child development, as well as knowledge of indicators that a child is not developing typically;

h. Good oral and written communication skills;

i. Willingness to receive ongoing mentoring from other teachers;

k. Knowledge of the importance of nurturing adult-child relationships on self-efficacy development;

l. Medication administration training (6).

Additionally, large family child care home caregivers/teachers should have at least one year of experience serving the ages and developmental abilities of the children in their large family child care home.

Assistants, aides, and volunteers employed by a large family child care home should meet the qualifications specified in Standard 1.3.2.3.

**Standard 1.4.1.1 Pre-service Training**

In addition to the credentials listed in Standard 1.3.1.1, upon employment, a director or administrator of a center or the lead caregiver/teacher in a family child care home should provide documentation of at least thirty clock-hours of pre-service training. This training should cover health, psychosocial, and safety issues for out-of-home child care facilities. Small family child care home caregivers/teachers may have up to ninety days to secure training.
after opening except for training on basic health and safety procedures and regulatory requirements.

All directors or program administrators and caregivers/teachers should document receipt of pre-service training prior to working with children that includes the following content on basic program operations:

a. Typical and atypical child development and appropriate best practice for a range of developmental and mental health needs including knowledge about the developmental stages for the ages of children enrolled in the facility;

b. Positive ways to support language, cognitive, social, and emotional development including appropriate guidance and discipline;

c. Developing and maintaining relationships with families of children enrolled, including the resources to obtain supportive services for children’s unique developmental needs;

d. Procedures for preventing the spread of infectious disease, including hand hygiene, cough and sneeze etiquette, cleaning and disinfection of toys and equipment, diaper changing, food handling, health department notification of reportable diseases, and health issues related to having animals in the facility;

e. Teaching child care staff and children about infection control and injury prevention through role modeling;

f. Safe sleep practices including reducing the risk of Sudden Infant Death Syndrome (SIDS) (infant sleep position and crib safety);

g. Shaken baby syndrome/abusive head trauma prevention and identification, including how to cope with a crying/fussy infant;

h. Poison prevention and poison safety;

i. Immunization requirements for children and staff;

j. Common childhood illnesses and their management, including child care exclusion policies and recognizing signs and symptoms of serious illness;

k. Reduction of injury and illness through environmental design and maintenance;

l. Knowledge of U.S. Consumer Product Safety Commission (CPSC) product recall reports;

m. Staff occupational health and safety practices, such as proper procedures, in accordance with Occupational Safety and Health Administration (OSHA) bloodborne pathogens regulations;

n. Emergency procedures and preparedness for disasters, emergencies, other threatening situations (including weather-related, natural disasters), and injury to infants and children in care;

o. Promotion of health and safety in the child care setting, including staff health and pregnant workers;

p. First aid including CPR for infants and children;
q. Recognition and reporting of child abuse and neglect in compliance with state laws and knowledge of protective factors to prevent child maltreatment;

r. Nutrition and age-appropriate child-feeding including food preparation, choking prevention, menu planning, and breastfeeding supportive practices;

s. Physical activity, including age-appropriate activities and limiting sedentary behaviors;

t. Prevention of childhood obesity and related chronic diseases;

u. Knowledge of environmental health issues for both children and staff;

v. Knowledge of medication administration policies and practices;

w. Caring for children with special health care needs, mental health needs, and developmental disabilities in compliance with the Americans with Disabilities Act (ADA);

x. Strategies for implementing care plans for children with special health care needs and inclusion of all children in activities;

y. Positive approaches to support diversity;

z. Positive ways to promote physical and intellectual development.

**Standard 1.4.2.2 Orientation for Care of Children with Special Health Care Needs**

When a child care facility enrolls a child with special health care needs, the facility should ensure that all staff members have been oriented in understanding that child’s special health care needs and have the skills to work with that child in a group setting.

Caregivers/teachers in small family child care homes, who care for a child with special health care needs, should meet with the parents/guardians and meet or speak with the child’s primary care provider (if the parent/guardian has provided prior, informed, written consent) or a child care health consultant to ensure that the child’s special health care needs will be met in child care and to learn how these needs may affect his/her developmental progression or play with other children.

In addition to Orientation Training, Standard 1.4.2.1, the orientation provided to staff in child care facilities should be based on the special health care needs of children who will be assigned to their care. All staff oriented for care of children with special health care needs should be knowledgeable about the care plans created by the child’s primary care provider in their medical home as well as any care plans created by other health professionals and therapists involved in the child’s care. A template for a care plan for children with special health care needs can be found in Appendix O. Child care health consultants can be an excellent resource for providing health and safety orientation or referrals to resources for such training. This training may include, but is not limited to, the following topics:
a. Positioning for feeding and handling, and risks for injury for children with physical/mental disabilities;
b. Toileting techniques;
c. Knowledge of special treatments or therapies (e.g., PT, OT, speech, nutrition/diet therapies, emotional support and behavioral therapies, medication administration, etc.) the child may need/receive in the child care setting;
d. Proper use and care of the individual child’s adaptive equipment, including how to recognize defective equipment and to notify parents/guardians that repairs are needed;
e. How different disabilities affect the child’s ability to participate in group activities;
f. Methods of helping the child with special health care needs or behavior problems to participate in the facility’s programs, including physical activity programs;
g. Role modeling, peer socialization, and interaction;
h. Behavior modification techniques, positive behavioral supports for children, promotion of self-esteem, and other techniques for managing behavior;
i. Grouping of children by skill levels, taking into account the child’s age and developmental level;
j. Health services or medical intervention for children with special health care problems;
k. Communication methods and needs of the child;
l. Dietary specifications for children who need to avoid specific foods or for children who have their diet modified to maintain their health, including support for continuation of breastfeeding;
m. Medication administration (for emergencies or on an ongoing basis);
n. Recognizing signs and symptoms of impending illness or change in health status;
o. Recognizing signs and symptoms of injury;
p. Understanding temperament and how individual behavioral differences affect a child’s adaptive skills, motivation, and energy;
q. Potential hazards of which staff should be aware;
r. Collaborating with families and outside service providers to create a health, developmental, and behavioral care plan for children with special needs;
s. Awareness of when to ask for medical advice and recommendations for non-emergent issues that arise in school (e.g., head lice, worms, diarrhea);
t. Knowledge of professionals with skills in various conditions, e.g., total communication for children with deafness, beginning orientation and mobility training for children with blindness (including arranging the physical environment effectively for such
children), language promotion for children with hearing-impairment and language delay/disorder, etc.;
u. How to work with parents/guardians and other professionals when assistive devices or medications are not consistently brought to the child care program or school;
v. How to safely transport a child with special health care needs.

**Standard 1.4.2.3 Orientation Topics**

During the first three months of employment, the director of a center or the caregiver/teacher in a large family home should document, for all full-time and part-time staff members, additional orientation in, and the employees' satisfactory knowledge of, the following topics:

- **a.** Recognition of symptoms of illness and correct documentation procedures for recording symptoms of illness. This should include the ability to perform a daily health check of children to determine whether any children are ill or injured and, if so, whether a child who is ill should be excluded from the facility;
- **b.** Exclusion and readmission procedures and policies;
- **c.** Cleaning, sanitation, and disinfection procedures and policies;
- **d.** Procedures for administering medication to children and for documenting medication administered to children;
- **e.** Procedures for notifying parents/guardians of an infectious disease occurring in children or staff within the facility;
- **f.** Procedures and policies for notifying public health officials about an outbreak of disease or the occurrence of a reportable disease;
- **g.** Emergency procedures and policies related to unintentional injury, medical emergency, and natural disasters;
- **h.** Procedure for accessing the child care health consultant for assistance;
- **i.** Injury prevention strategies and hazard identification procedures specific to the facility, equipment, etc.;
- **j.** Proper hand hygiene.

Before being assigned to tasks that involve identifying and responding to illness, staff members should receive orientation training on these topics. Small family child care home caregivers/teachers should not commence operation before receiving orientation on these topics in pre-service training (1).

**Standard 1.4.3.1 First Aid and CPR Training for Staff**

The director of a center or a large family child care home and the caregiver/teacher in a small family child care home should ensure all staff members involved in providing direct care have documentation of satisfactory completion of training in pediatric first aid and pediatric CPR skills. Pediatric CPR skills should be taught by demonstration, practice, and return demonstration to ensure the technique can be performed in an
emergency. These skills should be current according to the requirement specified for retraining by the organization that provided the training.

At least one staff person who has successfully completed training in pediatric first aid that includes CPR should be in attendance at all times with a child whose special care plan indicates an increased risk of needing respiratory or cardiac resuscitation.

Records of successful completion of training in pediatric first aid should be maintained in the personnel files of the facility.

**Standard 1.4.3.2 Topics Covered in First Aid Training**

First aid training should present an overview of Emergency Medical Services (EMS), accessing EMS, poison center services, accessing the poison center, safety at the scene, and isolation of body substances. First aid instruction should include, but not be limited to, recognition and first response of pediatric emergency management in a child care setting of the following situations:

- a. Management of a blocked airway and rescue breathing for infants and children with return demonstration by the learner (pediatric CPR);
- b. Abrasions and lacerations;
- c. Bleeding, including nosebleeds;
- d. Burns;
- e. Fainting;
- f. Poisoning, including swallowed, skin or eye contact, and inhaled;
- g. Puncture wounds, including splinters;
- h. Injuries, including insect, animal, and human bites;
- i. Poison control;
- j. Shock;
- k. Seizure care;
- l. Musculoskeletal injury (such as sprains, fractures);
- m. Dental and mouth injuries/trauma;
- n. Head injuries, including shaken baby syndrome/abusive head trauma;
- o. Allergic reactions, including information about when epinephrine might be required;
- p. Asthmatic reactions, including information about when rescue inhalers must be used;
- q. Eye injuries;
- r. Loss of consciousness;
- s. Electric shock;
- t. Drowning;
- u. Heat-related injuries, including heat exhaustion/heat stroke;
- v. Cold related injuries, including frostbite;
- w. Moving and positioning injured/ill persons;
x. Illness-related emergencies (such as stiff neck, inexplicable confusion, sudden onset of blood-red or purple rash, severe pain, temperature above 101°F [38.3°C] orally, above 102°F [38.9°C] rectally, or 100°F [37.8°C] or higher taken axillary [armpit] or measured by an equivalent method, and looking/acting severely ill);

y. Standard Precautions;

z. Organizing and implementing a plan to meet an emergency for any child with a special health care need;

aa. Addressing the needs of the other children in the group while managing emergencies in a child care setting;

ab. Applying first aid to children with special health care needs.

**Standard 1.4.3.3 CPR Training for Swimming and Water Play**

Facilities that have a swimming pool should require at least one staff member with current documentation of successful completion of training in infant and child (pediatric) CPR (Cardiopulmonary Resuscitation) be on duty at all times during business hours.

At least one of the caregivers/teachers, volunteers, or other adults who is counted in the child:staff ratio for swimming and water play should have documentation of successful completion of training in basic water safety, proper use of swimming pool rescue equipment, and infant and child CPR according to the criteria of the American Red Cross or the American Heart Association (AHA).

For small family child care homes, the person trained in water safety and CPR should be the caregiver/teacher. Written verification of successful completion of CPR and lifesaving training, water safety instructions, and emergency procedures should be kept on file.

**Standard 1.4.5.1 Training of Staff Who Handle Food**

All staff members with food handling responsibilities should obtain training in food service and safety. The director of a center or a large family child care home or the designated supervisor for food service should be a certified food protection manager or equivalent as demonstrated by completing an accredited food protection manager course. Small family child care personnel should secure training in food service and safety appropriate for their setting.

**Standard 1.4.5.2 Child Abuse and Neglect Education**

Caregivers/teachers should use child abuse and neglect prevention education to educate and establish child abuse and neglect prevention and recognition measures for the children, caregivers/teachers, and parents/guardians. The education should address physical, sexual, and...
psychological or emotional abuse and neglect. The dangers of shaking infants and toddlers and repeated exposure to domestic violence should be included in the education and prevention materials. Caregivers/teachers should also receive education on promoting protective factors to prevent child maltreatment. Caregivers/teachers should be able to identify signs of stress in families and assist families by providing support and linkages to resources when needed. Children with disabilities are at a higher risk of being abused. Special training in child abuse and neglect and children with disabilities should be provided (2).

Caregivers/teachers are mandatory reporters of child abuse or neglect. Caregivers/teachers should be trained in compliance with their state’s child abuse reporting laws. Child abuse reporting requirements are known and available from the child care regulation department in each state.

**Standard 1.5.0.1 Employment of Substitutes**

Substitutes should be employed to ensure that child:staff ratios and requirements for direct supervision are maintained at all times. Substitutes and volunteers should be at least eighteen years of age and must meet the requirements specified throughout Standards 1.3.2.1-1.3.2.6. Those without licenses/certificates should work under direct supervision and should not be alone with a group of children.

A substitute should complete the same background screening processes as the caregiver/teacher. Obtaining substitutes to provide medical care for children with special health care needs is particularly challenging. A substitute nurse should be experienced in delivering the expected medical services. Decisions should be made on whether a parent/guardian will be allowed to provide needed on-site medical services. Substitutes should be aware of the care plans (including emergency procedures) for children with special health care needs.

**Standard 1.5.0.2 Orientation of Substitutes**

The director of any center or large family child care home and the small family child care home caregiver/teacher should provide orientation training to newly hired substitutes to include a review of ALL the program’s policies and procedures (listed below is a sample). This training should include the opportunity for an evaluation and a repeat demonstration of the training lesson. In all child care settings the orientation should be documented. Substitutes should have background screenings.

All substitutes should be oriented to, and demonstrate competence in, the tasks for which they will be responsible. On the first day a substitute caregiver/teacher should be oriented on the following topics:

a. Safe infant sleep practices if an infant is enrolled in the program;
b. Any emergency medical procedure/medication needs of the children;
c. Any nutrition needs of the children.

All substitute caregivers/teachers, during the first week of employment, should be oriented to, and should demonstrate competence in at least the following items:

a. The names of the children for whom the caregiver/teacher will be responsible, and their specific developmental needs;
b. The planned program of activities at the facility;
c. Routines and transitions;
d. Acceptable methods of discipline;
e. Meal patterns and safe food handling policies of the facility (special attention should be given to life-threatening food allergies);
f. Emergency health and safety procedures;
g. General health policies and procedures as appropriate for the ages of the children cared for, including but not limited to the following:
   1. Hand hygiene techniques, including indications for hand hygiene;
   2. Diapering technique, if care is provided to children in diapers, including appropriate diaper disposal and diaper changing techniques, use and wearing of gloves;
   3. The practice of putting infants down to sleep positioned on their backs and on a firm surface along with all safe infant sleep practices to reduce the risk of Sudden Infant Death Syndrome (SIDS), as well as general nap time routines for all ages;
   4. Correct food preparation and storage techniques, if employee prepares food;
   5. Proper handling and storage of human milk when applicable and formula preparation if formula is handled;
   6. Bottle preparation including guidelines for human milk and formula if care is provided to children with bottles;
   7. Proper use of gloves in compliance with Occupational Safety and Health Administration (OSHA) bloodborne pathogens regulations;
   8. Injury prevention and safety including the role of mandatory child abuse reporter to report any suspected abuse/neglect.

h. Emergency plans and practices;
i. Access to list of authorized individuals for releasing children.
Standard 1.6.0.1 Child Care Health Consultants

A facility should identify and engage/partner with a child care health consultant (CCHC) who is a licensed health professional with education and experience in child and community health and child care and preferably specialized training in child care health consultation.

CCHCs have knowledge of resources and regulations and are comfortable linking health resources with child care facilities.

The child care health consultant should be knowledgeable in the following areas:

a. Consultation skills both as a child care health consultant as well as a member of an interdisciplinary team of consultants;
b. National health and safety standards for out-of-home child care;
c. Indicators of quality early care and education;
d. Day-to-day operations of child care facilities;
e. State child care licensing and public health requirements;
f. State health laws, Federal and State education laws (e.g., ADA, IDEA), and state professional practice acts for licensed professionals (e.g., State Nurse Practice Acts);
g. Infancy and early childhood development, social and emotional health, and developmentally appropriate practice;
h. Recognition and reporting requirements for infectious diseases;
i. American Academy of Pediatrics (AAP) and Early and Periodic Screening, Diagnosis, and Treatment (EPSDT) screening recommendations and immunizations schedules for children;
j. Importance of medical home and local and state resources to facilitate access to a medical home as well as child health insurance programs including Medicaid and State Children’s Health Insurance Program (SCHIP);
k. Injury prevention for children;
l. Oral health for children;
m. Nutrition and age-appropriate physical activity recommendations for children including feeding of infants and children, the importance of breastfeeding and the prevention of obesity;
n. Inclusion of children with special health care needs, and developmental disabilities in child care;
o. Safe medication administration practices;
p. Health education of children;
q. Recognition and reporting requirements for child abuse and neglect/child maltreatment;
r. Safe sleep practices and policies (including reducing the risk of SIDS);
s. Development and implementation of health and safety policies and practices including poison awareness and poison prevention;
t. Staff health, including adult health screening, occupational health risks, and immunizations;

u. Disaster planning resources and collaborations within child care community;

v. Community health and mental health resources for child, parent/guardian and staff health;

w. Importance of serving as a healthy role model for children and staff.

The child care health consultant should be able to perform or arrange for performance of the following activities:

a. Assessing caregivers’/teachers’ knowledge of health, development, and safety and offering training as indicated;

b. Assessing parents’/guardians’ health, development, and safety knowledge, and offering training as indicated;

c. Assessing children’s knowledge about health and safety and offering training as indicated;

d. Conducting a comprehensive indoor and outdoor health and safety assessment and on-going observations of the child care facility;

e. Consulting collaboratively on-site and/or by telephone or electronic media;

f. Providing community resources and referral for health, mental health and social needs, including accessing medical homes, children’s health insurance programs (e.g., CHIP), and services for special health care needs;

g. Developing or updating policies and procedures for child care facilities (see comment section below);

h. Reviewing health records of children;

i. Reviewing health records of caregivers/teachers;

j. Assisting caregivers/teachers and parents/guardians in the management of children with behavioral, social and emotional problems and those with special health care needs;

k. Consulting a child’s primary care provider about the child’s individualized health care plan and coordinating services in collaboration with parents/guardians, the primary care provider, and other health care professionals (the CCHC shows commitment to communicating with and helping coordinate the child’s care with the child’s medical home, and may assist with the coordination of skilled nursing care services at the child care facility);

l. Consulting with a child’s primary care provider about medications as needed, in collaboration with parents/guardians;

m. Teaching staff safe medication administration practices;

n. Monitoring safe medication administration practices;
o. Observing children’s behavior, development and health status and making recommendations if needed to staff and parents/guardians for further assessment by a child’s primary care provider;

p. Interpreting standards, regulations and accreditation requirements related to health and safety, as well as providing technical advice, separate and apart from an enforcement role of a regulation inspector or determining the status of the facility for recognition;

q. Understanding and observing confidentiality requirements;

r. Assisting in the development of disaster/emergency medical plans (especially for those children with special health care needs) in collaboration with community resources;

s. Developing an obesity prevention program in consultation with a nutritionist/registered dietitian (RD) and physical education specialist;

t. Working with other consultants such as nutritionists/RDs, kinesiologists (physical activity specialists), oral health consultants, social service workers, early childhood mental health consultants, and education consultants.

The role of the CCHC is to promote the health and development of children, families, and staff and to ensure a healthy and safe child care environment (11).

The CCHC is not acting as a primary care provider at the facility but offers critical services to the program and families by sharing health and developmental expertise, assessments of child, staff, and family health needs and community resources. The CCHC assists families in care coordination with the medical home and other health and developmental specialists. In addition, the CCHC should collaborate with an interdisciplinary team of early childhood consultants, such as, early childhood education, mental health, and nutrition consultants.

In order to provide effective consultation and support to programs, the CCHC should avoid conflict of interest related to other roles such as serving as a caregiver/teacher or regulator or a parent/guardian at the site to which child care health consultation is being provided.

The CCHC should have regular contact with the facility’s administrative authority, the staff, and the parents/guardians in the facility. The administrative authority should review, and collaborate with the CCHC in implementing recommended changes in policies and practices. In the case of consulting about children with special health care needs, the CCHC should have contact with the child’s medical home with permission from the child’s parent/guardian.

Programs with a significant number of non-English-speaking families should seek a CCHC who is culturally sensitive and knowledgeable about community health resources for the parents'/guardians’ native culture and languages.
Chapter 2: Program Activities for Healthy Development

**Standard 2.1.1.4 Monitoring Children’s Development/Obtaining Consent for Screening**

Child care settings provide daily indoor and outdoor opportunities for promoting and monitoring children’s development. Caregivers/teachers should monitor the children’s development, share observations with parents/guardians, and provide resource information as needed for screenings, evaluations, and early intervention and treatment. Caregivers/teachers should work in collaboration to monitor a child’s development with parents/guardians and in conjunction with the child’s primary care provider and health, education, mental health, and early intervention consultants. Caregivers/teachers should utilize the services of health and safety, education, mental health, and early intervention consultants to strengthen their observation skills, collaborate with families, and be knowledgeable of community resources.

Programs should have a formalized system of developmental screening with all children that can be used near the beginning of a child’s placement in the program, at least yearly thereafter, and as developmental concerns become apparent to staff and/or parents/guardians. The use of authentic assessment and curricular-based assessments should be an ongoing part of the services provided to all children (5-9). The facility’s formalized system should include a process for determining when a health or developmental screening or evaluation for a child is necessary. This process should include parental/guardian consent and participation.

Parents/guardians should be explicitly invited to:

a. Discuss reasons for a health or developmental assessment;
b. Participate in discussions of the results of their child’s evaluations and the relationship of their child’s needs to the caregivers’/teachers’ ability to serve that child appropriately;
c. Give alternative perspectives;
d. Share their expectations and goals for their child and have these expectations and goals integrated with any plan for their child;
e. Explore community resources and supports that might assist in meeting any identified needs that child care centers and family child care homes can provide;
f. Give written permission to share health information with primary health care professionals (medical home), child care health consultants and other professionals as appropriate;

The facility should document parents’/guardians’ presence at these meetings and invitations to attend.
If the parents/guardians do not attend the screening, the caregiver/teacher should inform the parents/guardians of the results, and offer an opportunity for discussion. Efforts should be made to provide notification of meetings in the primary language of the parents/guardians. Formal evaluations of a child’s health or development should also be shared with the child’s medical home with parent/guardian consent.

Programs are encouraged to utilize validated screening tools to monitor children’s development, as well as various measures that may inform their work facilitating children’s development and providing an enriching indoor and outdoor environment, such as authentic-based assessment, work sampling methods, observational assessments, and assessments intended to support curricular implementation (5,9). Programs should have clear policies for using reliable and valid methods of developmental screening with all children and for making referrals for diagnostic assessment and possible intervention for children who screen positive. All programs should use methods of ongoing developmental assessment that inform the curricular approaches used by the staff. Care must be taken in communicating the results. Screening is a way to identify a child at risk of a developmental delay or disorder. It is not a diagnosis.

If the screening or any observation of the child results in any concern about the child’s development, after consultation with the parents/guardians, the child should be referred to his or her primary care provider (medical home), or to an appropriate specialist or clinic for further evaluation. In some situations, a direct referral to the Early Intervention System in the respective state may also be required.

**Standard 2.1.2.1 Personal Caregiver/Teacher Relationships for Infants and Toddlers**

The facility should practice a relationship-based philosophy that promotes consistency and continuity of caregivers/teachers for infants and toddlers. The facility should limit the number of caregivers/teachers who interact with any one infant (1,2) to no more than five caregivers/teachers across the period that the child is an infant in child care. The caregiver/teacher should:

- a. Hold and comfort children who are upset;
- b. Engage in frequent, multiple, and rich social interchanges such as smiling, talking, touching, singing, and eating;
- c. Be play partners as well as protectors;
- d. Be attuned to children’s feelings and reflect them back;
- e. Communicate consistently with parents/guardians;
- f. Interact with children and develop a relationship in the context of everyday routines (diapering, feeding, etc.)

Opportunities should be provided for each child to develop a personal and affectionate relationship with, and attachment to, that child’s parents/guardians and one or a small number of caregivers/teachers whose
care for and responsiveness to the child ensure relief of distress, experiences of comfort and stimulation, and satisfaction of the need for a personal relationship.

**Standard 2.2.0.1 Methods of Supervision of Children**

Caregivers/teachers should directly supervise infants, toddlers, and preschoolers by sight and hearing at all times, even when the children are going to sleep, napping or sleeping, are beginning to wake up, or are indoors or outdoors. School-age children should be within sight or hearing at all times. Caregivers/teachers should not be on one floor level of the building, while children are on another floor or room. Ratios should remain the same whether inside or outside.

School-age children should be permitted to participate in activities off the premises with appropriate adult supervision and with written approval by a parent/guardian and by the caregiver. If parents/guardians give written permission for the school-age child to participate in off-premises activities, the facility would no longer be responsible for the child during the off-premises activity and not need to provide staff for the off-premises activity.

Caregivers/teachers should regularly count children (name to face on a scheduled basis, at every transition, and whenever leaving one area and arriving at another), going indoors or outdoors, to confirm the safe whereabouts of every child at all times. Additionally, they must be able to state how many children are in their care at all times.

Developmentally appropriate child:staff ratios should be met during all hours of operation, including indoor and outdoor play and field trips, and safety precautions for specific areas and equipment should be followed. No center-based facility or large family child care home should operate with fewer than two staff members if more than six children are in care, even if the group otherwise meets the child:staff ratio. Although centers often downsize the number of staff for the early arrival and late departure times, another adult must be present to help in the event of an emergency. The supervision policies of centers and large family child care homes should be written policies.

**Standard 2.2.0.4 Supervision Near Bodies of Water**

Constant and active supervision should be maintained when any child is in or around water (1). During any swimming/wading/water play activities where either an infant or a toddler is present, the ratio should always be one adult to one infant/toddler. Children ages thirteen months to five years of age should not be permitted to play in areas where there is any body of water, including swimming pools, ponds and irrigation ditches, built-in wading pools, tubs, pails, sinks, or toilets unless the supervising adult is within an arm’s length providing “touch supervision”.

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Caregivers/teachers should ensure that all pools meet the Virginia Graeme Baker Pool and Spa Safety Act, requiring the retrofitting of safe suction-type devices for pools and spas to prevent underwater entrapment of children in such locations with strong suction devices that have led to deaths of children of varying ages (2).

**Standard 2.2.0.6 Discipline Measures**

Reader’s Note: The word discipline means to teach and guide. Discipline is not punishment. The discipline standard therefore reflects an approach that focuses on preventing behavior problems by supporting children in learning appropriate social skills and emotional responses.

Caregivers/teachers should guide children to develop self-control and appropriate behaviors in the context of relationships with peers and adults. Caregivers/teachers should care for children without ever resorting to physical punishment or abusive language. When a child needs assistance to resolve a conflict, manage a transition, engage in a challenging situation, or express feelings, needs, and wants, the adult should help the child learn strategies for dealing with the situation. Discipline should be an ongoing process to help children learn to manage their own behavior in a socially acceptable manner, and should not just occur in response to a problem behavior. Rather, the adult’s guidance helps children respond to difficult situations using socially appropriate strategies. To develop self-control, children should receive adult support that is individual to the child and adapts as the child develops internal controls. This process should include:

a. Forming a positive relationship with the child. When children have a positive relationship with the adult, they are more likely to follow that person’s directions. This positive relationship occurs when the adult spends time talking to the child, listening to the child, following the child’s lead, playing with the child, and responding to the child’s needs;

b. Basing expectations on children’s developmental level;

c. Establishing simple rules children can understand (e.g., you can’t hurt others, our things, or yourself) and being proactive in teaching and supporting children in learning the rules;

d. Adapting the physical indoor and outdoor learning/play environment or family child care home to encourage positive behavior and self regulation by providing engaging materials based on children’s interests and ensuring that the learning environment promotes active participation of each child. Well-designed child care environments are ones that are supportive of appropriate behavior in children, and are designed to help children learn about what to expect in that environment and to promote positive interactions and engagement with others;

e. Modifying the learning/play environment (e.g., schedule, routine, activities, transitions) to support the child’s appropriate behavior;
f. Creating a predictable daily routine and schedule. When a routine is predictable, children are more likely to know what to do and what is expected of them. This may decrease anxiety in the child. When there is less anxiety, there may be less acting out. Reminders need to be given to the children so they can anticipate and prepare themselves for transitions within the schedule. Reminders should be individualized such that each child understands and anticipates the transition;

g. Using encouragement and descriptive praise. When clear encouragement and descriptive praise are used to give attention to appropriate behaviors, those behaviors are likely to be repeated. Encouragement and praise should be stated positively and descriptively. Encouragement and praise should provide information that the behavior the child engaged in was appropriate. Examples: “I can tell you are ready for circle time because you are sitting on your name and looking at me.” “Your friend looked so happy when you helped him clean up his toys.” “You must be so proud of yourself for putting on your coat all by yourself.” Encouragement and praise should label the behaviors, not the child (e.g., good listening, good eating, instead of good boy);

h. Using clear, direct, and simple commands. When clear commands are used with children, they are more likely to follow them. The caregiver/teacher should tell the child what to do rather than what NOT to do. The caregiver/teacher should limit the number of commands. The caregiver/teacher should use if/then and when/then statements with logical and natural consequences. These practices help children understand they can make choices and that choices have consequences;

i. Showing children positive alternatives rather than just telling children “no”;

j. Modeling desired behavior;

k. Using planned ignoring and redirection. Certain behaviors can be ignored while at the same time the adult is able to redirect the children to another activity. If the behavior cannot be ignored, the adult should prompt the child to use a more appropriate behavior and provide positive feedback when the child engages in the behavior;

l. Individualizing discipline based on the individual needs of children. For example, if a child has a hard time transitioning, the caregiver/teacher can identify strategies to help the child with the transition (individualized warning, job during transition, individual schedule, peer buddy to help, etc.) If a child has a difficult time during a large group activity, the child might be taught to ask for a break;
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m. Using time-out for behaviors that are persistent and unacceptable. Time-out should only be used in combination with instructional approaches that teach children what to do in place of the behavior problem. (See guidance for time-outs below.)

Expectations for children’s behavior and the facility’s policies regarding their response to behaviors should be written and shared with families and children of appropriate age. Further, the policies should address proactive as well as reactive strategies. Programs should work with families to support their children’s appropriate behaviors before it becomes a problem.

**Standard 2.2.0.8 Preventing Expulsions, Suspensions, and Other Limitations in Services**

Child care programs should not expel, suspend, or otherwise limit the amount of services (including denying outdoor time, withholding food, or using food as a reward/punishment) provided to a child or family on the basis of challenging behaviors or a health/safety condition or situation unless the condition or situation meets one of the two exceptions listed in this standard.

Expulsion refers to terminating the enrollment of a child or family in the regular group setting because of a challenging behavior or a health condition. Suspension and other limitations in services include all other reductions in the amount of time a child may be in attendance of the regular group setting, either by requiring the child to cease attendance for a particular period of time or reducing the number of days or amount of time that a child may attend. Requiring a child to attend the program in a special place away from the other children in the regular group setting is included in this definition.

Child care programs should have a comprehensive discipline policy that includes an explicit description of alternatives to expulsion for children exhibiting extreme levels of challenging behaviors, and should include the program’s protocol for preventing challenging behaviors. These policies should be in writing and clearly articulated and communicated to parents/guardians, staff and others. These policies should also explicitly state how the program plans to use any available internal mental health and other support staff during behavioral crises to eliminate to the degree possible any need for external supports (e.g., local police departments) during crises.

Staff should have access to in-service training on both a proactive and as-needed basis on how to reduce the likelihood of problem behaviors escalating to the level of risk for expulsion and how to more effectively manage behaviors throughout the entire class/group. Staff should also have access to in-service training, resources, and child care health consultation to manage children’s health conditions in collaboration with parents/guardians and the child’s primary care provider. Programs should

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attempt to obtain access to behavioral or mental health consultation to help establish and maintain environments that will support children’s mental well-being and social-emotional health, and have access to such a consultant when more targeted child-specific interventions are needed. Mental health consultation may be obtained from a variety of sources, as described in Standard 1.6.0.3.

When children exhibit or engage in challenging behaviors that cannot be resolved easily, as above, staff should:

a. Assess the health of the child and the adequacy of the curriculum in meeting the developmental and educational needs of the child;
b. Immediately engage the parents/guardians/family in a spirit of collaboration regarding how the child’s behaviors may be best handled, including appropriate solutions that have worked at home or in other settings;
c. Access an early childhood mental health consultant to assist in developing an effective plan to address the child’s challenging behaviors and to assist the child in developing age-appropriate, pro-social skills;
d. Facilitate, with the family’s assistance, a referral for an evaluation for either Part C (early intervention) or Part B (preschool special education), as well as any other appropriate community-based services (e.g., child mental health clinic);
e. Facilitate with the family communication with the child’s primary care provider (e.g., pediatrician, family medicine provider, etc.), so that the primary care provider can assess for any related health concerns and help facilitate appropriate referrals.

The only possible reasons for considering expelling, suspending or otherwise limiting services to a child on the basis of challenging behaviors are:

a. Continued placement in the class and/or program clearly jeopardizes the physical safety of the child and/or his/her classmates as assessed by a qualified early childhood mental health consultant AND all possible interventions and supports recommended by a qualified early childhood mental health consultant aimed at providing a physically safe environment have been exhausted; or
b. The family is unwilling to participate in mental health consultation that has been provided through the child care program or independently obtain and participate in child mental health assistance available in the community; or

The only possible reasons for considering expelling, suspending or otherwise limiting services to a child on the basis of challenging behaviors are:

a. Continued placement in the class and/or program clearly jeopardizes the physical safety of the child and/or his/her classmates as assessed by a qualified early childhood mental health consultant AND all possible interventions and supports recommended by a qualified early childhood mental health consultant aimed at providing a physically safe environment have been exhausted; or
b. The family is unwilling to participate in mental health consultation that has been provided through the child care program or independently obtain and participate in child mental health assistance available in the community; or

The only possible reasons for considering expelling, suspending or otherwise limiting services to a child on the basis of challenging behaviors are:

a. Continued placement in the class and/or program clearly jeopardizes the physical safety of the child and/or his/her classmates as assessed by a qualified early childhood mental health consultant AND all possible interventions and supports recommended by a qualified early childhood mental health consultant aimed at providing a physically safe environment have been exhausted; or
b. The family is unwilling to participate in mental health consultation that has been provided through the child care program or independently obtain and participate in child mental health assistance available in the community; or

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that is better able to meet these needs has been identified and can immediately provide services to the child. In either of the above three cases, a qualified early childhood mental health consultant, qualified special education staff, and/or qualified community-based mental health care provider should be consulted, referrals for special education services and other community-based services should be facilitated, and a detailed transition plan from this program to a more appropriate setting should be developed with the family and followed. This transition could include a different private or public-funded child care or early education program in the community that is better equipped to address the behavioral concerns (e.g., therapeutic preschool programs, Head Start or Early Head Start, prekindergarten programs in the public schools that have access to additional support staff, etc.), or public-funded special education services for infants and toddlers (i.e., Part C early intervention) or preschoolers (i.e., Part B preschool special education).

To the degree that safety can be maintained, the child should be transitioned directly to the receiving program. The program should assist parents/guardians in securing the more appropriate placement, perhaps using the services of a local child care resource and referral agency. With parent/guardian permission, the child’s primary care provider should be consulted and a referral for a comprehensive assessment by qualified mental health provider and the appropriate special education system should be initiated. If abuse or neglect is suspected, then appropriate child protection services should be informed. Finally, no child should ever be expelled or suspended from care without first conducting an assessment of the safety of alternative arrangements (e.g., Who will care for the child? Will the child be adequately and safely supervised at all times?) (1).

**Standard 2.2.0.9 Prohibited Caregiver/Teacher Behaviors**

The following behaviors should be prohibited in all child care settings and by all caregivers/teachers:

a. The use of corporal punishment. Corporal punishment means punishment inflicted directly on the body including, but not limited to:

1. Hitting, spanking (refers to striking a child with an open hand on the buttocks or extremities with the intention of modifying behavior without causing physical injury), shaking, slapping, twisting, pulling, squeezing, or biting;
2. Demanding excessive physical exercise, excessive rest, or strenuous or bizarre postures;
3. Compelling a child to eat or have in his/her mouth soap, food, spices, or foreign substances;
4. Exposing a child to extremes of temperature.
b. Isolating a child in an adjacent room, hallway, closet, darkened area, play area, or any other area where a child cannot be seen or supervised;

c. Binding or tying to restrict movement, such as in a car seat (except when travelling) or taping the mouth;

d. Using or withholding food as a punishment or reward;

e. Toilet learning/training methods that punish, demean, or humiliate a child;

f. Any form of emotional abuse, including rejecting, terrorizing, extended ignoring, isolating, or corrupting a child;

g. Any abuse or maltreatment of a child, either as an incident of discipline or otherwise. Any child care program must not tolerate, or in any manner condone, an act of abuse or neglect of a child by an older child, employee, volunteer, or any person employed by the facility or child’s family;

h. Abusive, profane, or sarcastic language or verbal abuse, threats, or derogatory remarks about the child or child’s family;

i. Any form of public or private humiliation, including threats of physical punishment (1);

j. Physical activity/outdoor time should not be taken away as punishment.

**Standard 2.2.0.10 Using Physical Restraint**

Reader’s Note: It should never be necessary to physically restrain a typically developing child unless his/her safety and/or that of others are at risk.

When a child with special behavioral or mental health issues is enrolled who may frequently need the cautious use of restraint in the event of behavior that endangers his or her safety or the safety of others, a behavioral care plan should be developed with input from the child’s primary care provider, mental health provider, parents/guardians, center director/family child care home caregiver/teacher, child care health consultant, and possibly early childhood mental health consultant in order to address underlying issues and reduce the need for physical restraint.

That behavioral care plan should include:

a. An indication and documentation of the use of other behavioral strategies before the use of restraint and a precise definition of when the child could be restrained;

b. That the restraint be limited to holding the child as gently as possible to accomplish the restraint;

c. That such child restraint techniques do not violate the state’s mental health code;

d. That the amount of time the child is physically restrained should be the minimum necessary to control the situation and be age-
appropriate; reevaluation and change of strategy should be used every few minutes;

e. That no bonds, ties, blankets, straps, car seats, heavy weights (such as adult body sitting on child), or abusive words should be used;

f. That a designated and trained staff person, who should be on the premises whenever this specific child is present, would be the only person to carry out the restraint.

**Standard 2.3.3.1 Parents’/Guardians’ Provision of Information on Their Child’s Health and Behavior**

The facility should ask parents/guardians for information regarding the child’s health, nutrition, level of physical activity, and behavioral status upon registration or when there has been an extended gap in the child’s attendance at the facility. The child’s health record should be updated if s/he have had any changes in their health or immunization status. Parents/guardians should be encouraged to sign a release of information/agreement so that child care workers can communicate directly with the child’s medical home/primary care provider.
Chapter 3: Health Promotion and Protection

Standard 3.1.2.1 Routine Health Supervision and Growth Monitoring

The facility should require that each child has routine health supervision by the child’s primary care provider, according to the standards of the American Academy of Pediatrics (AAP) (3). For all children, health supervision includes routine screening tests, immunizations, and chronic or acute illness monitoring. For children younger than twenty-four months of age, health supervision includes documentation and plotting of sex-specific charts on child growth standards from the World Health Organization (WHO), available at http://www.who.int/childgrowth/standards/en/, and assessing diet and activity. For children twenty-four months of age and older, sex-specific height and weight graphs should be plotted by the primary care provider in addition to body mass index (BMI), according to the Centers for Disease Control and Prevention (CDC). BMI is classified as underweight (BMI less than 5%), healthy weight (BMI 5%-84%), overweight (BMI 85%-94%), and obese (BMI equal to or greater than 95%). Follow-up visits with the child’s primary care provider that include a full assessment and laboratory evaluations should be scheduled for children with weight for length greater than 95% and BMI greater than 85% (5).

School health services can meet this standard for school-age children in care if they meet the AAP’s standards for school-age children and if the results of each child’s examinations are shared with the caregiver/teacher as well as with the school health system. With parental/guardian consent, pertinent health information should be exchanged among the child’s routine source of health care and all participants in the child’s care, including any school health program involved in the care of the child.

Standard 3.1.3.1 Active Opportunities for Physical Activity

The facility should promote children’s active play every day. Children should have ample opportunity to do moderate to vigorous activities such as running, climbing, dancing, skipping, and jumping. All children, birth to six years, should participate daily in:

a. Two to three occasions of active play outdoors, weather permitting (see Standard 3.1.3.2: Playing Outdoors for appropriate weather conditions);

b. Two or more structured or caregiver/teacher/adult-led activities or games that promote movement over the course of the day—indoor or outdoor;

c. Continuous opportunities to develop and practice age-appropriate gross motor and movement skills.
The total time allotted for outdoor play and moderate to vigorous indoor or outdoor physical activity can be adjusted for the age group and weather conditions.

a. Outdoor play:
   1. Infants (birth to twelve months of age) should be taken outside two to three times per day, as tolerated. There is no recommended duration of infants’ outdoor play;
   2. Toddlers (twelve months to three years) and preschoolers (three to six years) should be allowed sixty to ninety total minutes of outdoor play. These outdoor times can be curtailed somewhat during adverse weather conditions in which children may still play safely outdoors for shorter periods, but should increase the time of indoor activity, so the total amount of exercise should remain the same;

b. Total time allotted for moderate to vigorous activities:
   1. Toddlers should be allowed sixty to ninety minutes per eight-hour day for moderate to vigorous physical activity, including running;
   2. Preschoolers should be allowed ninety to one hundred and twenty minutes per eight-hour day.

Infants should have supervised tummy time every day when they are awake. Beginning on the first day at the early care and education program, caregivers/teachers should interact with an awake infant on their tummy for short periods of time (three to five minutes), increasing the amount of time as the infant shows s/he enjoys the activity.

Time spent outdoors has been found to be a strong, consistent predictor of children’s physical activity. Children can accumulate opportunities for activity over the course of several shorter segments of at least ten minutes each. Because structured activities have been shown to produce higher levels of physical activity in young children, it is recommended that caregivers/teachers incorporate two or more short structured activities (five to ten minutes) or games daily that promote physical activity.

Opportunities to be actively enjoying physical activity should be incorporated into part-time programs by prorating these recommendations accordingly, i.e., twenty minutes of outdoor play for every three hours in the facility.

Active play should never be withheld from children who misbehave (e.g., child is kept indoors to help another caregiver/teacher while the rest of the children go outside). However, children with out-of-control behavior may need five minutes or less to calm themselves or settle down before resuming cooperative play or activities.
Infants should not be seated for more than fifteen minutes at a time, except during meals or naps. Infant equipment such as swings, stationary activity centers (ex. exersaucers), infant seats (ex. bouncers), molded seats, etc. if used should only be used for short periods of time. A least restrictive environment should be encouraged at all times (5,6,26).

Children should have adequate space for both inside and outside play.

**Standard 3.1.3.2 Playing Outdoors**

Children should play outdoors when the conditions do not pose a safety risk, individual child health risk, or significant health risk of frostbite or of heat related illness. Caregivers/teachers must protect children from harm caused by adverse weather, ensuring that children wear appropriate clothing and/or appropriate shelter is provided for the weather conditions. Outdoor play for infants may include riding in a carriage or stroller; however, infants should be offered opportunities for gross motor play outdoors, as well.

Weather that poses a significant health risk should include wind chill factor at or below minus 15°F and heat index at or above 90°F, as identified by the National Weather Service (NWS).

**Sunny weather:**

a. Children should be protected from the sun by using shade, sun-protective clothing, and sunscreen with UVB-ray and UVA-ray protection of SPF 15 or higher, with permission from parents/guardians;

b. Children should wear sun-protective clothing, such as hats, when playing outdoors between the hours of 10 AM and 2 PM.

**Warm weather:**

a. Children should be well hydrated before engaging in prolonged periods of physical activity and encouraged to drink water during periods of prolonged physical activity;

b. Caregivers/teachers should encourage parents/guardians to have children dress in clothing that is light-colored, lightweight, and limited to one layer of absorbent material that will maximize the evaporation of sweat;

c. On hot days, infants receiving human milk in a bottle can be given additional human milk in a bottle but should not be given water, especially in the first six months of life. Infants receiving formula and water can be given additional formula in a bottle.

**Cold weather:**

a. Children should wear layers of loose-fitting, lightweight clothing. Outer garments such as coats should be tightly woven, and be at least water repellent when precipitation is present, such as rain or snow;
b. Children should wear a hat, coat, and gloves/mittens kept snug at the wrist;

c. Caregivers/teachers should check children’s extremities for maintenance of normal color and warmth at least every fifteen minutes.

Caregivers/teachers should also be aware of environmental hazards such as contaminated water, loud noises, and lead in soil when selecting an area to play outdoors. Children should be observed closely when playing in dirt/soil, so that no soil is ingested. Play areas should be secure and away from heavy traffic areas.

**Standard 3.1.4.1 Safe Sleep Practices and SIDS/Suffocation Risk Reduction**

Facilities should develop a written policy that describes the practices to be used to promote safe sleep when infants are napping or sleeping. The policy should explain that these practices aim to reduce the risk of sudden infant death syndrome (SIDS) or suffocation death and other infant deaths that could occur when an infant is in a crib or asleep.

All staff, parents/guardians, volunteers and others approved to enter rooms where infants are cared for should receive a copy of the Safe Sleep Policy and additional educational information and training on the importance of consistent use of safe sleep policies and practices before they are allowed to care for infants (i.e., first day of employment/volunteering/subbing). Documentation that training has occurred and that these individuals have received and reviewed the written policy should be kept on file.

All staff, parents/guardians, volunteers and others who care for infants in the child care setting should follow these required safe sleep practices as recommended by the American Academy of Pediatrics (AAP) (1):

a. Infants up to twelve months of age should be placed for sleep in a supine position (wholly on their back) for every nap or sleep time unless the infant’s primary care provider has completed a signed waiver indicating that the child requires an alternate sleep position;

b. Infants should be placed for sleep in safe sleep environments; which includes: a firm crib mattress covered by a tight-fitting sheet in a safety-approved crib (the crib should meet the standards and guidelines reviewed/approved by the U.S. Consumer Product Safety Commission [CPSC] and ASTM International [ASTM]), no monitors or positioning devices should be used unless required by the child’s primary care provider, and no other items should be in a crib occupied by an infant except for a pacifier;

c. Infants should not nap or sleep in a car safety seat, bean bag chair, bouncy seat, infant seat, swing, jumping chair, play pen or play yard, highchair, chair, futon, or any other type of
furniture/equipment that is not a safety-approved crib (that is in compliance with the CPSC and ASTM safety standards) (4);

d. If an infant arrives at the facility asleep in a car safety seat, the parent/guardian or caregiver/teacher should immediately remove the sleeping infant from this seat and place them in the supine position in a safe sleep environment (i.e., the infant’s assigned crib);

e. If an infant falls asleep in any place that is not a safe sleep environment, staff should immediately move the infant and place them in the supine position in their crib;

f. Only one infant should be placed in each crib (stackable cribs are not recommended);

g. Soft or loose bedding should be kept away from sleeping infants and out of safe sleep environments. These include, but are not limited to: bumper pads, pillows, quilts, comforters, sleep positioning devices, sheepskins, blankets, flat sheets, cloth diapers, bibs, etc. Also, blankets/items should not be hung on the sides of cribs. Swaddling infants when they are in a crib is not necessary or recommended, but rather one-piece sleepers should be used (see Standard 3.1.4.2 for more detail information on swaddling);

h. Toys, including mobiles and other types of play equipment that are designed to be attached to any part of the crib should be kept away from sleeping infants and out of safe sleep environments;

i. When caregivers/teachers place infants in their crib for sleep, they should check to ensure that the temperature in the room is comfortable for a lightly clothed adult, check the infants to ensure that they are comfortably clothed (not overheated or sweaty), and that bibs, necklaces, and garments with ties or hoods are removed (clothing sacks or other clothing designed for sleep can be used in lieu of blankets);

j. Infants should be directly observed by sight and sound at all times, including when they are going to sleep, are sleeping, or are in the process of waking up;

k. Bedding should be changed between children, and if mats are used, they should be cleaned between uses.

The lighting in the room must allow the caregiver/teacher to see each infant’s face, to view the color of the infant’s skin, and to check on the infant’s breathing and placement of the pacifier (if used).

A caregiver/teacher trained in safe sleep practices and approved to care for infants should be present in each room at all times where there is an infant. This caregiver/teacher should remain alert and should actively supervise sleeping infants in an ongoing manner. Also, the caregiver/teacher should check to ensure that the infant’s head remains uncovered and re-adjust clothing as needed.
The construction and use of sleeping rooms for infants separate from the infant group room is not recommended due to the need for direct supervision. In situations where there are existing facilities with separate sleeping rooms, facilities should develop a plan to modify room assignments and/or practices to eliminate placing infants to sleep in separate rooms.

Facilities should be aware of the current recommendation of the AAP about pacifier use (1). If pacifiers are allowed, facilities should have a written policy that describes relevant procedures and guidelines. Pacifier use outside of a crib in rooms and programs where there are mobile infants or toddlers is not recommended.

**Standard 3.1.5.1 Routine Oral Hygiene Activities**

Caregivers/teachers should promote the habit of regular tooth brushing. All children with teeth should brush or have their teeth brushed at least once during the hours the child is in child care. Children under two years of age should have only a smear of fluoride toothpaste (rice grain) on the brush when brushing. Those over two years of age should use a pea-sized amount of fluoride toothpaste. An ideal time to brush is after eating. The caregiver/teacher should either brush the child’s teeth or supervise as the child brushes his/her own teeth. Disposable gloves should be worn by the caregiver/teacher if contact with a child’s oral fluids is anticipated. The younger the child, the more the caregiver/teacher needs to be involved. The caregiver/teacher should be able to evaluate each child’s motor activity and to teach the child the correct method of tooth brushing when the child is capable of doing this activity. The caregiver/teacher should monitor the tooth brushing activity and thoroughly brush the child’s teeth after the child has finished brushing, preferably for a total of two minutes. Children whose teeth are brushed at home twice a day may be exempted since additional brushing has little additive benefit and may expose a child to excess fluoride toothpaste.

The cavity-causing effect of frequent exposure to food or juice should be reduced by offering the children rinsing water after snacks and meals when tooth brushing is not possible. Local dental health professionals can facilitate compliance with these activities by offering education and training for the child care staff and providing oral health presentations for the children and parents/guardians.

**Standard 3.2.1.4 Diaper Changing Procedure**

The following diaper changing procedure should be posted in the changing area, should be followed for all diaper changes, and should be used as part of staff evaluation of caregivers/teachers who diaper. The signage should be simple and should be in multiple languages if caregivers/teachers who speak multiple languages are involved in diapering. All employees who will diaper should undergo training and periodic assessment of diapering.
practices. Caregivers/teachers should never leave a child unattended on a table or countertop, even for an instant. A safety strap or harness should not be used on the diaper changing table. If an emergency arises, caregivers/teachers should bring any child on an elevated surface to the floor or take the child with them.

An EPA-registered disinfectant suitable for the surface material that is being disinfected should be used. If an EPA-registered product is not available, then household bleach diluted with water is a practical alternative. All cleaning and disinfecting solutions should be stored to be accessible to the caregiver/teacher but out of reach of any child. Please refer to Appendix J, Selecting an Appropriate Sanitizer or Disinfectant.

Step 1: Get organized. Before bringing the child to the diaper changing area, perform hand hygiene, gather and bring supplies to the diaper changing area:

a. Non-absorbent paper liner large enough to cover the changing surface from the child’s shoulders to beyond the child’s feet;
b. Unused diaper, clean clothes (if you need them);
c. Wipes, dampened cloths or wet paper towels for cleaning the child’s genitalia and buttocks readily available;
d. A plastic bag for any soiled clothes or cloth diapers;
e. Disposable gloves, if you plan to use them (put gloves on before handling soiled clothing or diapers) and remove them before handling clean diapers and clothing;
f. A thick application of any diaper cream (e.g., zinc oxide ointment), when appropriate, removed from the container to a piece of disposable material such as facial or toilet tissue.

Step 2: Carry the child to the changing table, keeping soiled clothing away from you and any surfaces you cannot easily clean and sanitize after the change.

a. Always keep a hand on the child;
b. If the child’s feet cannot be kept out of the diaper or from contact with soiled skin during the changing process, remove the child’s shoes and socks so the child does not contaminate these surfaces with stool or urine during the diaper changing.

Step 3: Clean the child’s diaper area.

a. Place the child on the diaper change surface and unfasten the diaper, but leave the soiled diaper under the child;
b. If safety pins are used, close each pin immediately once it is removed and keep pins out of the child’s reach (never hold pins in your mouth);
c. Lift the child’s legs as needed to use disposable wipes, or a dampened cloth or wet paper towel to clean the skin on the child’s
genitalia and buttocks and prevent recontamination from a soiled diaper. Remove stool and urine from front to back and use a fresh wipe, or a dampened cloth or wet paper towel each time you swipe. Put the soiled wipes or paper towels into the soiled diaper or directly into a plastic-lined, hands-free covered can. Reusable cloths should be stored in a washable, plastic-lined, tightly covered receptacle (within arm’s reach of diaper changing tables) until they can be laundered. The cover should not require touching with contaminated hands or objects.

Step 4: Remove the soiled diaper and clothing without contaminating any surface not already in contact with stool or urine.

a. Fold the soiled surface of the diaper inward;
b. Put soiled disposable diapers in a covered, plastic-lined, hands-free covered can. If reusable cloth diapers are used, put the soiled cloth diaper and its contents (without emptying or rinsing) in a plastic bag or into a plastic-lined, hands-free covered can to give to parents/guardians or laundry service;
c. Put soiled clothes in a plastic-lined, hands-free plastic bag;
d. If gloves were used, remove them using the proper technique (see Appendix D) and put them into a plastic-lined, hands-free covered can;
e. Whether or not gloves were used, use a fresh wipe to wipe the hands of the caregiver/teacher and another fresh wipe to wipe the child’s hands. Put the wipes into the plastic-lined, hands-free covered can;
f. Check for spills under the child. If there are any, use the paper that extends under the child’s feet to fold over the soiled area so a fresh, unsoiled paper surface is now under the child’s buttocks.

Step 5: Put on a clean diaper and dress the child.

a. Slide a fresh diaper under the child;
b. Use a facial or toilet tissue or wear clean disposable glove to apply any necessary diaper creams, discarding the tissue or glove in a covered, plastic-lined, hands-free covered can;
c. Note and plan to report any skin problems such as redness, skin cracks, or bleeding;
d. Fasten the diaper; if pins are used, place your hand between the child and the diaper when inserting the pin.

Step 6: Wash the child’s hands and return the child to a supervised area.

a. Use soap and warm water, between 60°F and 120°F, at a sink to wash the child’s hands, if you can.

Step 7: Clean and disinfect the diaper-changing surface.
a. Dispose of the disposable paper liner used on the diaper changing surface in a plastic-lined, hands-free covered can;
b. If clothing was soiled, securely tie the plastic bag used to store the clothing and send home;
c. Remove any visible soil from the changing surface with a disposable paper towel saturated with water and detergent, rinse;
d. Wet the entire changing surface with a disinfectant that is appropriate for the surface material you are treating. Follow the manufacturer’s instructions for use;
e. Put away the disinfectant. Some types of disinfectants may require rinsing the change table surface with fresh water afterwards.

Step 8: Perform hand hygiene according to the procedure in Standard 3.2.2.2 and record the diaper change in the child’s daily log.

a. In the daily log, record what was in the diaper and any problems (such as a loose stool, an unusual odor, blood in the stool, or any skin irritation), and report as necessary (2).

**Standard 3.2.2.1 Situations that Require Hand Hygiene**

All staff, volunteers, and children should follow the procedure in Standard 3.2.2.2 for hand hygiene at the following times:

a. Upon arrival for the day, after breaks, or when moving from one child care group to another;
b. Before and after:
   1. Preparing food or beverages;
   2. Eating, handling food, or feeding a child;
   3. Giving medication or applying a medical ointment or cream in which a break in the skin (e.g., sores, cuts, or scrapes) may be encountered;
   4. Playing in water (including swimming) that is used by more than one person;
   5. Diapering;
c. After:
   1. Using the toilet or helping a child use a toilet;
   2. Handling bodily fluid (mucus, blood, vomit), from sneezing, wiping and blowing noses, from mouths, or from sores;
   3. Handling animals or cleaning up animal waste;
   4. Playing in sand, on wooden play sets, and outdoors;
   5. Cleaning or handling the garbage.

Situations or times that children and staff should perform hand hygiene should be posted in all food preparation, hand hygiene, diapering, and toileting areas.

National Health and Safety Performance Standards
Standard 3.2.2.2 Handwashing Procedure

Children and staff members should wash their hands using the following method:

a. Check to be sure a clean, disposable paper (or single-use cloth) towel is available;

b. Turn on warm water, between 60°F and 120°F, to a comfortable temperature;

c. Moisten hands with water and apply soap (not antibacterial) to hands;

d. Rub hands together vigorously until a soapy lather appears, hands are out of the water stream, and continue for at least twenty seconds (sing Happy Birthday silently twice) (2). Rub areas between fingers, around nail beds, under fingernails, jewelry, and back of hands. Nails should be kept short; acrylic nails should not worn (3);

e. Rinse hands under running water, between 60°F and 120°F, until they are free of soap and dirt. Leave the water running while drying hands;

f. Dry hands with the clean, disposable paper or single use cloth towel;

g. If taps do not shut off automatically, turn taps off with a disposable paper or single use cloth towel;

h. Throw the disposable paper towel into a lined trash container; or place single-use cloth towels in the laundry hamper; or hang individually labeled cloth towels to dry. Use hand lotion to prevent chapping of hands, if desired.

The use of alcohol based hand sanitizers is an alternative to traditional handwashing with soap and water by children over twenty-four months of age and adults on hands that are not visibly soiled. A single pump of an alcohol-based sanitizer should be dispensed. Hands should be rubbed together, distributing sanitizer to all hand and finger surfaces and hands should be permitted to air dry.

Situations/times that children and staff should wash their hands should be posted in all handwashing areas.

Use of antimicrobial soap is not recommended in child care settings. There are no data to support use of antibacterial soaps over other liquid soaps.

Children and staff who need to open a door to leave a bathroom or diaper changing area should open the door with a disposable towel to avoid possibly re-contaminating clean hands. If a child can not open the door or turn off the faucet, they should be assisted by an adult.
Standard 3.2.2.3 Assisting Children with Hand Hygiene

Caregivers/teachers should provide assistance with handwashing at a sink for infants who can be safely cradled in one arm and for children who can stand but not wash their hands independently. A child who can stand should either use a child-height sink or stand on a safety step at a height at which the child’s hands can hang freely under the running water. After assisting the child with handwashing, the staff member should wash his or her own hands. Hand hygiene with an alcohol-based sanitizer is an alternative to handwashing with soap and water by children over twenty-four months of age and adults when there is no visible soiling of hands (1).

Standard 3.2.3.4 Prevention of Exposure to Blood and Body Fluids

Child care facilities should adopt the use of Standard Precautions developed for use in hospitals by The Centers for Disease Control and Prevention (CDC). Standard Precautions should be used to handle potential exposure to blood, including blood-containing body fluids and tissue discharges, and to handle other potentially infectious fluids.

In child care settings:

a. Use of disposable gloves is optional unless blood or blood containing body fluids may contact hands. Gloves are not required for feeding human milk, cleaning up of spills of human milk, or for diapering;
b. Gowns and masks are not required;
c. Barriers to prevent contact with body fluids include moisture-resistant disposable diaper table paper, disposable gloves, and eye protection.

Caregivers/teachers are required to be educated regarding Standard Precautions to prevent transmission of bloodborne pathogens before beginning to work in the facility and at least annually thereafter. Training must comply with requirements of the Occupational Safety and Health Administration (OSHA).

Procedures for Standard Precautions should include:

a. Surfaces that may come in contact with potentially infectious body fluids must be disposable or of a material that can be disinfected. Use of materials that can be sterilized is not required.
b. The staff should use barriers and techniques that:
   1. Minimize potential contact of mucous membranes or openings in skin to blood or other potentially infectious body fluids and tissue discharges; and
   2. Reduce the spread of infectious material within the child care facility. Such techniques include avoiding touching
surfaces with potentially contaminated materials unless those surfaces are disinfected before further contact occurs with them by other objects or individuals.

c. When spills of body fluids, urine, feces, blood, saliva, nasal discharge, eye discharge, injury or tissue discharges occur, these spills should be cleaned up immediately, and further managed as follows:

3. For spills of vomit, urine, and feces, all floors, walls, bathrooms, tabletops, toys, furnishings and play equipment, kitchen counter tops, and diaper-changing tables in contact should be cleaned and disinfected as for the procedure for diaper changing tables in Standard 3.2.1.4, Step 7;

4. For spills of blood or other potentially infectious body fluids, including injury and tissue discharges, the area should be cleaned and disinfected. Care should be taken and eye protection used to avoid splashing any contaminated materials onto any mucus membrane (eyes, nose, mouth);

5. Blood-contaminated material and diapers should be disposed of in a plastic bag with a secure tie;

6. Floors, rugs, and carpeting that have been contaminated by body fluids should be cleaned by blotting to remove the fluid as quickly as possible, then disinfected by spot-cleaning with a detergent-disinfectant. Additional cleaning by shampooing or steam cleaning the contaminated surface may be necessary. Caregivers/teachers should consult with local health departments for additional guidance on cleaning contaminated floors, rugs, and carpeting.

Prior to using a disinfectant, clean the surface with a detergent and rinse well with water. Facilities should follow the manufacturer’s instruction for preparation and use of disinfectant (3,4). For guidance on disinfectants, refer to Appendix J, Selecting an Appropriate Sanitizer or Disinfectant.

If blood or bodily fluids enter a mucous membrane (eyes, nose, mouth) the following procedure should occur. Flush the exposed area thoroughly with water. The goal of washing or flushing is to reduce the amount of the pathogen to which an exposed individual has contact. The optimal length of time for washing or flushing an exposed area is not known. Standard practice for managing mucous membrane(s) exposures to toxic substances is to flush the affected area for at least fifteen to twenty minutes. In the absence of data to support the effectiveness of shorter periods of flushing it seems prudent to use the same fifteen to twenty minute standard following exposure to bloodborne pathogens (5).
Standard 3.3.0.1 Routine Cleaning, Sanitizing, and Disinfecting

Keeping objects and surfaces in a child care setting as clean and free of pathogens as possible requires a combination of:

a. Frequent cleaning; and
b. When necessary, an application of a sanitizer or disinfectant.

Facilities should follow a routine schedule of cleaning, sanitizing, and disinfecting as outlined in Appendix K, Routine Schedule for Cleaning, Sanitizing, and Disinfecting.

Cleaning, sanitizing and disinfecting products should not be used in close proximity to children, and adequate ventilation should be maintained during any cleaning, sanitizing or disinfecting procedure to prevent children and caregivers/teachers from inhaling potentially toxic fumes.

Standard 3.4.1.1 Use of Tobacco, Alcohol, and Illegal Drugs

Tobacco use, alcohol, and illegal drugs should be prohibited on the premises of the program (both indoor and outdoor environments) and in any vehicles used by the program at all times. Caregivers/teachers should not use tobacco, alcohol, or illegal drugs off the premises during the child care program’s paid time including break time.

Standard 3.4.3.1 Emergency Procedures

When an immediate emergency medical response is required, the following emergency procedures should be utilized:

a. First aid should be employed and an emergency medical response team should be called such as 9-1-1 and/or the poison center if a poison emergency (1-800-222-1222);
b. The program should implement a plan for emergency transportation to a local emergency medical facility;
c. The parent/guardian or parent/guardian’s emergency contact person should be called as soon as practical;
d. A staff member should accompany the child to the hospital and will stay with the child until the parent/guardian or emergency contact person arrives. Child to staff ratio must be maintained, so staff may need to be called in to maintain the required ratio.

Programs should develop contingency plans for emergencies or disaster situations when it may not be possible or feasible to follow standard or previously agreed upon emergency procedures (see also Standard 9.2.4.3, Disaster Planning, Training, and Communication). Children with known medical conditions that might involve emergent care require a Care Plan created by the child’s primary care provider. All staff need to be trained to manage an emergency until emergency medical care becomes available.
**Standard 3.4.3.3 Response to Fire and Burns**

Children who are developmentally able to understand, should be instructed to STOP, DROP, and ROLL when garments catch fire. Children should be instructed to crawl on the floor under the smoke if necessary when they evacuate the building. This instruction is part of ongoing health and safety education and fire drills/exercise.

Cool water should be applied to burns immediately. The injury should be covered with a loose bandage or clean, dry cloth. Medical assessment/care should be immediate.

**Standard 3.4.4.1 Recognizing and Reporting Suspected Child Abuse, Neglect, and Exploitation**

Each facility should have a written policy for reporting child abuse and neglect. Caregivers/teachers are mandated reporters of child abuse and neglect. The facility should report to the child abuse reporting hotline, department of social services, child protective services, or police as required by state and local laws, in any instance where there is reasonable cause to believe that child abuse and neglect has occurred. Every staff person should be oriented to what and how to report. Phone numbers and reporting system as required by state or local agencies should be clearly posted by every phone.

Caregivers/teachers should receive initial and ongoing training to assist them in preventing child abuse and neglect and in recognizing signs of child abuse and neglect. Programs are encouraged to partner with primary care providers, child care health consultants and/or child protection advocates to provide training and to be available for consultation.

Employees and volunteers in centers and large family child care homes should receive an instruction sheet about child abuse and neglect reporting that contains a summary of the state child abuse reporting statute and a statement that they will not be discharged/disciplined solely because they have made a child abuse and neglect report. Some states have specific forms that are required to be completed when abuse and neglect is reported. Some states have forms that are not required but assist mandated reporters in documenting accurate and thorough reports. In those states, facilities should have such forms on hand and all staff should be trained in the appropriate use of those forms.

Parents/guardians should be notified upon enrollment of the facility’s child abuse and neglect reporting requirement and procedures.

**Standard 3.4.4.3 Preventing and Identifying Shaken Baby Syndrome/Abusive Head Trauma**

All child care facilities should have a policy and procedure to identify and prevent shaken baby syndrome/abusive head trauma. All
caregivers/teachers who are in direct contact with children including substitute caregivers/teachers and volunteers, should receive training on preventing shaken baby syndrome/abusive head trauma, recognition of potential signs and symptoms of shaken baby syndrome/abusive head trauma, strategies for coping with a crying, fussing or distraught child, and the development and vulnerabilities of the brain in infancy and early childhood.

**TYPE OF FACILITY:** Center

**Standard 3.4.5.1 Sun Safety Including Sunscreen**

Caregivers/teachers should implement the following procedures to ensure sun safety for themselves and the children under their supervision:

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<tbody>
<tr>
<td>a.</td>
<td>Keep infants younger than six months out of direct sunlight. Find shade under a tree, umbrella, or the stroller canopy;</td>
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<tr>
<td>b.</td>
<td>Wear a hat or cap with a brim that faces forward to shield the face;</td>
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<tr>
<td>c.</td>
<td>Limit sun exposure between 10 AM and 2 PM, when UV rays are strongest;</td>
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<td>d.</td>
<td>Wear child safe shatter resistant sunglasses with at least 99% UV protection;</td>
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<tr>
<td>e.</td>
<td>Apply sunscreen (1).</td>
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Over-the-counter ointments and creams, such as sunscreen that are used for preventive purposes do not require a written authorization from a primary care provider with prescriptive authority. However, parent/guardian written permission is required, and all label instructions must be followed. If the skin is broken or an allergic reaction is observed, caregivers/teachers should discontinue use and notify the parent/guardian.

If parents/guardians give permission, sunscreen should be applied on all exposed areas, especially the face (avoiding the eye area), nose, ears, feet, and hands and rubbed in well especially from May through September. Sunscreen is needed on cloudy days and in the winter at high altitudes. Sun reflects off water, snow, sand, and concrete. “Broad spectrum” sunscreen will screen out both UVB and UVA rays. Use sunscreen with an SPF of 15 or higher, the higher the SPF the more UVB protection offered. UVA protection is designated by a star rating system, with four stars the highest allowed in an over-the-counter product.

Sunscreen should be applied thirty minutes before going outdoors as it needs time to absorb into the skin. If the children will be out for more than one hour, sunscreen will need to be reapplied every two hours as it can wear off. If children are playing in water, reapplication will be needed more frequently. Children should also be protected from the sun by using shade and sun protective clothing. Sun exposure should be limited between the hours of 10 AM and 2 PM when the sun’s rays are the strongest.
Sunscreen should be applied to the child at least once by the parents/guardians and the child observed for a reaction to the sunscreen prior to its use in child care.

**Standard 3.4.6.1 Strangulation Hazards**

Strings and cords (such as those that are parts of toys and those found on window coverings) long enough to encircle a child’s neck should not be accessible to children in child care. Miniblinds and venetian blinds should not have looped cords. Vertical blinds, continuous looped blinds, and drapery cords should have tension or tie-down devices to hold the cords tight. Inner cord stops should be installed. Shoulder straps on guitars and chin straps on hats should be removed (1).

Straps/handles on purses/bags used for dramatic play should be removed or shortened. Ties, scarves, necklaces, and boas used for dramatic play should not be used for children under three years. If used by children three years and over, children should be supervised.

Pacifiers attached to strings or ribbons should not be placed around infants’ necks or attached to infants’ clothing.

Hood and neck strings from all children's outerwear, including jackets and sweatshirts, should be removed. Drawstrings on the waist or bottom of garments should not extend more than three inches outside the garment when it is fully expanded. These strings should have no knots or toggles on the free ends. The drawstring should be sewn to the garment at its midpoint so the string cannot be pulled out through one side.

**Standard 3.5.0.1 Care Plan for Children with Special Health Care Needs**

Reader’s Note: Children with special health care needs are defined as “…those who have or are at increased risk for a chronic physical, developmental, behavioral, or emotional condition and who also require health and related services of a type or amount beyond that required by children generally” (1).

Any child who meets these criteria should have a Routine and Emergent Care Plan completed by their primary care provider in their medical home. In addition to the information specified in Standard 9.4.2.4 for the Health Report, there should be:

a. A list of the child’s diagnosis/diagnoses;
b. Contact information for the primary care provider and any relevant sub-specialists (i.e., endocrinologists, oncologists, etc.);
c. Medications to be administered on a scheduled basis;
d. Medications to be administered on an emergent basis with clearly stated parameters, signs, and symptoms that warrant giving the medication written in lay language;

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e. Procedures to be performed;

f. Allergies;

g. Dietary modifications required for the health of the child;

h. Activity modifications;

i. Environmental modifications;

j. Stimulus that initiates or precipitates a reaction or series of reactions (triggers) to avoid;

k. Symptoms for caregiver/teachers to observe;

l. Behavioral modifications;

m. Emergency response plans – both if the child has a medical emergency and special factors to consider in programmatic emergency, like a fire;

n. Suggested special skills training and education for staff.

A template for a Care Plan for children with special health care needs is provided in Appendix O.

The Care Plan should be updated after every hospitalization or significant change in health status of the child. The Care Plan is completed by the primary care provider in the medical home with input from parents/guardians, and it is implemented in the child care setting. The child care health consultant should be involved to assure adequate information, training, and monitoring is available for child care staff.

**Standard 3.5.0.2 Caring for Children Who Require Medical Procedures**

A facility that enrolls children who require the following medical procedures: tube feedings, endotracheal suctioning, supplemental oxygen, postural drainage, or catheterization daily (unless the child requiring catheterization can perform this function on his/her own), checking blood sugars or any other special medical procedures performed routinely, or who might require special procedures on an urgent basis, should receive a written plan of care from the primary care provider who prescribed the special treatment (such as a urologist for catheterization). Often, the child’s primary care provider may be able to provide this information. This plan of care should address any special preparation to perform routine and/or urgent procedures (other than those that might be required in an emergency for any typical child, such as cardiopulmonary resuscitation [CPR]). This plan of care should include instructions for how to receive training in performing the procedure, performing the procedure, a description of common and uncommon complications of the procedure, and what to do and who to notify if complications occur. Specific/relevant training for the child care staff should be provided by a qualified health care professional in accordance with state practice acts. Facilities should follow state laws where such laws require RN’s or LPN’s under RN supervision to perform certain medical procedures. Updated, written medical orders are required for nursing procedures.
Standard 3.6.1.1 Inclusion/Exclusion/Dismissal of Children


Preparing for managing illness:

Caregivers/teachers should:

a. Encourage all families to have a backup plan for child care in the event of short or long term exclusion;

b. Review with families the inclusion/exclusion criteria and clarify that the program staff (not the families) will make the final decision about whether children who are ill may stay based on the program’s inclusion/exclusion criteria and their ability to care for the child who is ill without compromising the care of other children in the program;

c. Develop, with a child care health consultant, protocols and procedures for handling children’s illnesses, including care plans and an inclusion/exclusion policy;

d. Request the primary care provider’s note to readmit a child if the primary care provider’s advice is needed to determine whether the child is a health risk to others, or if the primary care provider’s guidance is needed about any special care the child requires (1);

e. Rely on the family’s description of the child’s behavior to determine whether the child is well enough to return, unless the child’s status is unclear from the family’s report.

Daily health checks as described in Standard 3.1.1.1 should be performed upon arrival of each child each day. Staff should objectively determine if the child is ill or well. Staff should determine which children with mild illnesses can remain in care and which need to be excluded.

Staff should notify the parent/guardian when a child develops new signs or symptoms of illness. Parent/guardian notification should be immediate for emergency or urgent issues. Staff should notify parents/guardians of children who have symptoms that require exclusion and parents/guardians should remove the child from the child care setting as soon as possible. For children whose symptoms do not require exclusion, verbal or written notification of the parent/guardian at the end of the day is acceptable. Most conditions that require exclusion do not require a primary care provider visit before reentering care.

Conditions/symptoms that do not require exclusion:

a. Common colds, runny noses (regardless of color or consistency of nasal discharge);
b. A cough not associated with a infectious disease (such as pertussis) or a fever;
c. Watery, yellow or white discharge or crusting eye discharge without fever, eye pain, or eyelid redness;
d. Yellow or white eye drainage that is not associated with pink or red conjunctiva (i.e., the whites of the eyes);
e. Pink eye (bacterial conjunctivitis) indicated by pink or red conjunctiva with white or yellow eye mucous drainage and matted eyelids after sleep. Parents/guardians should discuss care of this condition with their child’s primary care provider, and follow the primary care provider’s advice. Some primary care providers do not think it is necessary to examine the child if the discussion with the parents/guardians suggests that the condition is likely to be self-limited. If two unrelated children in the same program have conjunctivitis, the organism causing the conjunctivitis may have a higher risk for transmission and a child health care professional should be consulted;
f. Fever without any signs or symptoms of illness in children who are older than six months regardless of whether acetaminophen or ibuprofen was given. Fever (temperature above 101°F [38.3°C] orally, above 102°F [38.9°C] rectally, or 100°F [37.8°C] or higher taken axillary [armpit] or measured by an equivalent method) is an indication of the body’s response to something, but is neither a disease nor a serious problem by itself. Body temperature can be elevated by overheating caused by overdressing or a hot environment, reactions to medications, and response to infection. If the child is behaving normally but has a fever of below 102ºF per rectum or the equivalent, the child should be monitored, but does not need to be excluded for fever alone;
g. Rash without fever and behavioral changes;
h. Lice or nits (exclusion for treatment of an active lice infestation may be delayed until the end of the day);
i. Ringworm (exclusion for treatment may be delayed until the end of the day);
j. Molluscum contagiosum (do not require exclusion or covering of lesions);
k. Thrush (i.e., white spots or patches in the mouth or on the cheeks or gums);
l. Fifth disease (slapped cheek disease, parvovirus B19) once the rash has appeared;
m. Methicillin-resistant Staphylococcus aureus, or MRSA, without an infection or illness that would otherwise require exclusion. Known MRSA carriers or colonized individuals should not be excluded;
n. Cytomegalovirus infection;
o. Chronic hepatitis B infection;
p. Human immunodeficiency virus (HIV) infection;
q. Asymptomatic children who have been previously evaluated and found to be shedding potentially infectious organisms in the stool. Children who are continent of stool or who are diapered with formed stools that can be contained in the diaper may return to care. For some infectious organisms, exclusion is required until certain guidelines have been met. Note: These agents are not common and caregivers/teachers will usually not know the cause of most cases of diarrhea;

r. Children with chronic infectious conditions that can be accommodated in the program according to the legal requirement of federal law in the Americans with Disabilities Act. The act requires that child care programs make reasonable accommodations for children with disabilities and/or chronic illnesses, considering each child individually.

Key criteria for exclusion of children who are ill:

When a child becomes ill but does not require immediate medical help, a determination must be made regarding whether the child should be sent home (i.e., should be temporarily “excluded” from child care). Most illnesses do not require exclusion. The caregiver/teacher should determine if the illness:

a. Prevents the child from participating comfortably in activities;

b. Results in a need for care that is greater than the staff can provide without compromising the health and safety of other children;

c. Poses a risk of spread of harmful diseases to others.

If any of the above criteria are met, the child should be excluded, regardless of the type of illness. Decisions about caring for the child while awaiting parent/guardian pick-up should be made on a case-by-case basis providing care that is comfortable for the child considering factors such as the child’s age, the surroundings, potential risk to others and the type and severity of symptoms the child is exhibiting. The child should be supervised by someone who knows the child well and who will continue to observe the child for new or worsening symptoms. If symptoms allow the child to remain in their usual care setting while awaiting pick-up, the child should be separated from other children by at least 3 feet until the child leaves to help minimize exposure of staff and children not previously in close contact with the child. All who have been in contact with the ill child must wash their hands. Toys, equipment and surfaces used by the ill child should be cleaned and disinfected after the child leaves.

Temporary exclusion is recommended when the child has any of the following conditions:

a. The illness prevents the child from participating comfortably in activities;
b. The illness results in a need for care that is greater than the staff can provide without compromising the health and safety of other children;

c. An acute change in behavior this could include lethargy/lack of responsiveness, irritability, persistent crying, difficult breathing, or having a quickly spreading rash;

d. Fever (temperature above 101°F [38.3°C] orally, above 102°F [38.9°C] rectally, or 100°F [37.8°C] or higher taken axillary [armpit] or measured by an equivalent method) and behavior change or other signs and symptoms (e.g., sore throat, rash, vomiting, diarrhea). An unexplained temperature above 100°F (37.8°C) axillary (armpit) or 101°F (38.3°C) rectally in a child younger than six months should be medically evaluated. Any infant younger than two months of age with any fever should get urgent medical attention. See COMMENTS Below for important information about taking temperatures;

e. Diarrhea is defined by watery stools or decreased form of stool that is not associated with changes of diet. Exclusion is required for all diapered children whose stool is not contained in the diaper and toilet-trained children if the diarrhea is causing soiled pants or clothing. In addition, diapered children with diarrhea should be excluded if the stool frequency exceeds two or more stools above normal for that child, because this may cause too much work for the caregivers/teachers. Readmission after diarrhea can occur when diapered children have their stool contained by the diaper (even if the stools remain loose) and when toilet-trained children are continent. Special circumstances that require specific exclusion criteria include the following (2):

1. Toxin-producing *E. coli* or *Shigella* infection, until stools are formed and the test results of two stool cultures obtained from stools produced twenty-four hours apart do not detect these organisms;

2. *Salmonella* serotype Typhi infection, until diarrhea resolves. In children younger than five years with *Salmonella* serotype Typhi, three negative stool cultures obtained with twenty-four-hour intervals are required; people five years of age or older may return after a twenty-four-hour period without a diarrheal stool. Stool cultures should be collected from other attendees and staff members, and all infected people should be excluded;

f. Blood or mucus in the stools not explained by dietary change, medication, or hard stools;

g. Vomiting more than two times in the previous twenty-four hours, unless the vomiting is determined to be caused by a non-infectious condition and the child remains adequately hydrated;
h. Abdominal pain that continues for more than two hours or intermittent pain associated with fever or other signs or symptoms of illness;

i. Mouth sores with drooling unless the child’s primary care provider or local health department authority states that the child is noninfectious;

j. Rash with fever or behavioral changes, until the primary care provider has determined that the illness is not a infectious disease;

k. Active tuberculosis, until the child’s primary care provider or local health department states child is on appropriate treatment and can return;

l. Impetigo, until treatment has been started;

m. Streptococcal pharyngitis (i.e., strep throat or other streptococcal infection), until twenty-four hours after treatment has been started;

n. Head lice until after the first treatment (note: exclusion is not necessary before the end of the program day);

o. Scabies, until after treatment has been given;

p. Chickenpox (varicella), until all lesions have dried or crusted (usually six days after onset of rash);

q. Rubella, until six days after the rash appears;

r. Pertussis, until five days of appropriate antibiotic treatment;

s. Mumps, until five days after onset of parotid gland swelling;

t. Measles, until four days after onset of rash;

u. Hepatitis A virus infection, until one week after onset of illness or jaundice if the child’s symptoms are mild or as directed by the health department. (Note: immunization status of child care contacts should be confirmed; within a fourteen-day period of exposure, incompletely immunized or unimmunized contacts from one through forty years of age should receive the hepatitis A vaccine as post exposure prophylaxis, unless contraindicated.) Other individuals may receive immune globulin. Consult with a primary care provider for dosage and recommendations;

v. Any child determined by the local health department to be contributing to the transmission of illness during an outbreak.

Procedures for a child who requires exclusion:

The caregiver/teacher will:

a. Make decisions about caring for the child while awaiting parent/guardian pick-up on a case-by-case basis providing care that is comfortable for the child considering factors such as the child’s age, the surroundings, potential risk to others and the type and severity of symptoms the child is exhibiting. The child should be supervised by someone who knows the child well and who will continue to observe the child for new or worsening symptoms. If symptoms allow the child to remain in their usual care setting...
while awaiting pick-up, the child should be separated from other children by at least 3 feet until the child leaves to help minimize exposure of staff and children not previously in close contact with the child. All who have been in contact with the ill child must wash their hands. Toys, equipment and surfaces used by the ill child should be cleaned and disinfected after the child leaves;

b. Ask the family to pick up the child as soon as possible;

c. Discuss the signs and symptoms of illness with the parent/guardian who is assuming care. Review guidelines for return to child care. If necessary, provide the family with a written communication that may be given to the primary care provider. The communication should include onset time of symptoms, observations about the child, vital signs and times (e.g., temperature 101.5°F at 10:30 AM) and any actions taken and the time actions were taken (e.g., one children’s acetaminophen given at 11:00 AM). The nature and severity of symptoms and or requirements of the local or state health department will determine the necessity of medical consultation. Telephone advice, electronic transmissions of instructions are acceptable without an office visit;

d. Follow the advice of the child’s primary care provider;

e. Contact the local health department if there is a question of a reportable (harmful) infectious disease in a child or staff member in the facility. If there are conflicting opinions from different primary care providers about the management of a child with a reportable infectious disease, the health department has the legal authority to make a final determination;

f. Document actions in the child’s file with date, time, symptoms, and actions taken (and by whom); sign and date the document;

g. In collaboration with the local health department, notify the parents of contacts to the child or staff member with presumed or confirmed reportable infectious infection.

The caregiver/teacher should make the decision about whether a child meets or does not meet the exclusion criteria for participation and the child’s need for care relative to the staff’s ability to provide care. If parents/guardians and the child care staff disagree, and the reason for exclusion relates to the child’s ability to participate or the caregiver’s/teacher’s ability to provide care for the other children, the caregiver/teacher should not be required to accept responsibility for the care of the child.

Reportable conditions:

The current list of infectious diseases designated as notifiable in the United States at the national level by the Centers for Disease Control and

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The caregiver/teacher should contact the local health department:

a. When a child or staff member who is in contact with others has a reportable disease;

b. If a reportable illness occurs among the staff, children, or families involved with the program;

c. For assistance in managing a suspected outbreak. Generally, an outbreak can be considered to be two or more unrelated (e.g., not siblings) children with the same diagnosis or symptoms in the same group within one week. Clusters of mild respiratory illness, ear infections, and certain dermatological conditions are common and generally do not need to be reported.

Caregivers/teachers should work with their child care health consultants to develop policies and procedures for alerting staff and families about their responsibility to report illnesses to the program and for the program to report diseases to the local health authorities.

**Standard 3.6.1.2 Staff Exclusion for Illness**

Please note that if a staff member has no contact with the children, or with anything with which the children come into contact, this standard may not apply to that staff member.

A facility should not deny admission to or send home a staff member or substitute with illness unless one or more of the following conditions exists. The staff member should be excluded as follows:

a. Chickenpox, until all lesions have dried and crusted, which usually occurs by six days;

b. Shingles, only if the lesions cannot be covered by clothing or a dressing until the lesions have crusted;

c. Rash with fever or joint pain, until diagnosed not to be measles or rubella;

d. Measles, until four days after onset of the rash (if the staff member or substitute is immunocompetent);

e. Rubella, until six days after onset of rash;

f. Diarrheal illness, stool frequency exceeds two or more stools above normal for that individual or blood in stools, until diarrhea resolves; if *E. coli* 0157:H7 or *Shigella* is isolated, until diarrhea resolves and two stool cultures are negative, for *Salmonella* serotype *Typhi*, three stool cultures collected at twenty-four hour intervals and resolution of diarrhea is required;

g. Vomiting illness, two or more episodes of vomiting during the previous twenty-four hours, until vomiting resolves or is determined to result from non-infectious conditions;
h. Hepatitis A virus, until one week after symptom onset or as directed by the health department;
i. Pertussis, until after five days of appropriate antibiotic therapy;
j. Skin infection (such as impetigo), until treatment has been initiated; exclusion should continue if lesion is draining AND cannot be covered;
k. Tuberculosis, until noninfectious and cleared by a health department official or a primary care provider;
l. Strep throat or other streptococcal infection, until twenty-four hours after initial antibiotic treatment and end of fever;
m. Head lice, from the end of the day of discovery until after the first treatment;
n. Scabies, until after treatment has been completed;
o. \textit{Haemophilus influenzae} type b (Hib), prophylaxis, until antibiotic treatment has been initiated;
p. Meningococcal infection, until appropriate therapy has been administered for twenty-four hours;
q. Respiratory illness, if the illness limits the staff member’s ability to provide an acceptable level of child care and compromises the health and safety of the children.

Caregivers/teachers who have herpes cold sores should not be excluded from the child care facility, but should:

1. Cover and not touch their lesions;
2. Carefully observe hand hygiene policies.

**Standard 3.6.1.4 Infectious Disease Outbreak Control**

During the course of an identified outbreak of any reportable illness at the facility, a child or staff member should be excluded if the health department official or primary care provider suspects that the child or staff member is contributing to transmission of the illness at the facility, is not adequately immunized when there is an outbreak of a vaccine preventable disease, or the circulating pathogen poses an increased risk to the individual. The child or staff member should be readmitted when the health department official or primary care provider who made the initial determination decides that the risk of transmission is no longer present.

**Standard 3.6.3.1 Medication Administration**

The administration of medicines at the facility should be limited to:

a. Prescription or non-prescription medication (over-the-counter [OTC]) ordered by the prescribing health professional for a specific child with written permission of the parent/guardian. Written orders from the prescribing health professional should specify medical need, medication, dosage, and length of time to give medication;

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b. Labeled medications brought to the child care facility by the parent/guardian in the original container (with a label that includes the child’s name, date filled, prescribing clinician’s name, pharmacy name and phone number, dosage/instructions, and relevant warnings).

Facilities should not administer folk or homemade remedy medications or treatment. Facilities should not administer a medication that is prescribed for one child in the family to another child in the family.

No prescription or non-prescription medication (OTC) should be given to any child without written orders from a prescribing health professional and written permission from a parent/guardian. Exception: Non-prescription sunscreen and insect repellent always require parental consent but do not require instructions from each child’s prescribing health professional.

Documentation that the medicine/agent is administered to the child as prescribed is required.

“Standing orders” guidance should include directions for facilities to be equipped, staffed, and monitored by the primary care provider capable of having the special health care plan modified as needed. Standing orders for medication should only be allowed for individual children with a documented medical need if a special care plan is provided by the child’s primary care provider in conjunction with the standing order or for OTC medications for which a primary care provider has provided specific instructions that define the children, conditions and methods for administration of the medication. Signatures from the primary care provider and one of the child’s parents/guardians must be obtained on the special care plan. Care plans should be updated as needed, but at least yearly.

**Standard 3.6.3.2 Labeling, Storage, and Disposal of Medications**

Any prescription medication should be dated and kept in the original container. The container should be labeled by a pharmacist with:

- The child’s first and last names;
- The date the prescription was filled;
- The name of the prescribing health professional who wrote the prescription, the medication’s expiration date;
- The manufacturer’s instructions or prescription label with specific, legible instructions for administration, storage, and disposal;
- The name and strength of the medication.

Over-the-counter medications should be kept in the original container as sold by the manufacturer, labeled by the parent/guardian, with the child’s name and specific instructions given by the child’s prescribing health professional for administration.
All medications, refrigerated or unrefrigerated, should:

- Have child-resistant caps;
- Be kept in an organized fashion;
- Be stored away from food;
- Be stored at the proper temperature;
- Be completely inaccessible to children.

Medication should not be used beyond the date of expiration. Unused medications should be returned to the parent/guardian for disposal. In the event medication cannot be returned to the parent or guardian, it should be disposed of according to the recommendations of the US Food and Drug Administration (FDA) (1). Documentation should be kept with the child care facility of all disposed medications. The current guidelines are as follows:

1. If a medication lists any specific instructions on how to dispose of it, follow those directions.
2. If there are community drug take back programs, participate in those.
3. Remove medications from their original containers and put them in a sealable bag. Mix medications with an undesirable substance such as used coffee grounds or kitty litter. Throw the mixture into the regular trash. Make sure children do not have access to the trash (1).

**Standard 3.6.3.3 Training of Caregivers/Teachers to Administer Medication**

Any caregiver/teacher who administers medication should complete a standardized training course that includes skill and competency assessment in medication administration. The trainer in medication administration should be a licensed health professional. The course should be repeated according to state and/or local regulation. At a minimum, skill and competency should be monitored annually or whenever medication administration error occurs. In facilities with large numbers of children with special health care needs involving daily medication, best practice would indicate strong consideration to the hiring of a licensed health care professional. Lacking that, caregivers/teachers should be trained to:

1. Check that the name of the child on the medication and the child receiving the medication are the same;
2. Check that the name of the medication is the same as the name of the medication on the instructions to give the medication if the instructions are not on the medication container that is labeled with the child’s name;
3. Read and understand the label/prescription directions or the separate written instructions in relation to the measured dose,
frequency, route of administration (ex. by mouth, ear canal, eye, etc.) and other special instructions relative to the medication;

d. Observe and report any side effects from medications;

e. Document the administration of each dose by the time and the amount given;

f. Document the person giving the administration and any side effects noted;

g. Handle and store all medications according to label instructions and regulations.

The trainer in medication administration should be a licensed health professional: Registered Nurse, Advanced Practice Registered Nurse (APRN), MD, Physician's Assistant, or Pharmacist.
Chapter 4: Nutrition and Food Service

**Standard 4.2.0.3 Use of USDA CACFP Guidelines**

All meals and snacks and their preparation, service, and storage should meet the requirements for meals of the child care component of the U.S. Department of Agriculture (USDA), Child and Adult Care Food Program (CACFP), and the 7 Code of Federal Regulations (CFR) Part 226.20 (1,5).

**Standard 4.2.0.6 Availability of Drinking Water**

Clean, sanitary drinking water should be readily available, in indoor and outdoor areas, throughout the day. Water should not be a substitute for milk at meals or snacks where milk is a required food component unless it is recommended by the child’s primary care provider.

On hot days, infants receiving human milk in a bottle can be given additional human milk in a bottle but should not be given water, especially in the first six months of life. Infants receiving formula and water can be given additional formula in a bottle. Toddlers and older children will need additional water as physical activity and/or hot temperatures cause their needs to increase. Children should learn to drink water from a cup or drinking fountain without mouthing the fixture. They should not be allowed to have water continuously in hand in a “sippy cup” or bottle. Permitting toddlers to suck continuously on a bottle or sippy cup filled with water, in order to soothe themselves, may cause nutritional or in rare instances, electrolyte imbalances. When tooth brushing is not done after a feeding, children should be offered water to drink to rinse food from their teeth.

**Standard 4.2.0.8 Feeding Plans and Dietary Modifications**

Before a child enters an early care and education facility, the facility should obtain a written history that contains any special nutrition or feeding needs for the child, including use of human milk or any special feeding utensils. The staff should review this history with the child’s parents/guardians, clarifying and discussing how parental/guardian home feeding routines may differ from the facility’s planned routine. The child’s primary care provider should provide written information about any dietary modifications or special feeding techniques that are required at the early care and education program and these plans should be shared with the child’s parents/guardians upon request.

If dietary modifications are indicated, based on a child’s medical or special dietary needs, the caregiver/teacher should modify or supplement the child’s diet to meet the individual child’s specific needs. Dietary modifications should be made in consultation with the parents/guardians and the child’s primary care provider. Caregivers/teachers can consult with a nutritionist/registered dietitian.
Reasons for modification of a child’s diet may be related to food sensitivity. Food sensitivity includes a range of conditions in which a child exhibits an adverse reaction to a food that, in some instances, can be life threatening. Modification of a child’s diet may be related to a food allergy, inability to digest or to tolerate certain foods, need for extra calories, need for special positioning while eating, diabetes and the need to match food with insulin, food idiosyncrasies, and other identified feeding issues. Examples include celiac disease, phenylketonuria, diabetes, severe food allergy (anaphylaxis), and others. In some cases, a child may become ill if the child is unable to eat, so missing a meal could have a negative consequence, especially for diabetics.

For a child identified with special health care needs for dietary modification or special feeding techniques, written instructions from the child’s parent/guardian and the child’s primary care provider should be provided in the child’s record and carried out accordingly. Dietary modifications should be recorded. These written instructions must identify:

a. The child’s full name and date of instructions;
b. The child’s special needs;
c. Any dietary restrictions based on the special needs;
d. Any special feeding or eating utensils;
e. Any foods to be omitted from the diet and any foods to be substituted;
f. Limitations of life activities;
g. Any other pertinent special needs information;
h. What, if anything, needs to be done if the child is exposed to restricted foods.

The written history of special nutrition or feeding needs should be used to develop individual feeding plans and, collectively, to develop facility menus. Disciplines related to special nutrition needs, including nutrition, nursing, speech, occupational therapy, and physical therapy, should participate when needed and/or when they are available to the facility. The nutritionist/registered dietitian should approve menus that accommodate needed dietary modifications.

The feeding plan should include steps to take when a situation arises that requires rapid response by the staff, such as a child’s choking during mealtime or a child with a known history of food allergies demonstrating signs and symptoms of anaphylaxis (severe allergic reaction, e.g., difficulty breathing or severe redness and swelling of the face or mouth). The completed plan should be on file and accessible to the staff and available to parents/guardians upon request.

**Standard 4.2.0.10 Care for Children with Food Allergies**

When children with food allergies attend the early care and education facility, the following should occur:

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a. Each child with a food allergy should have a care plan prepared for the facility by the child’s primary care provider, to include:
   1. Written instructions regarding the food(s) to which the child is allergic and steps that need to be taken to avoid that food;
   2. A detailed treatment plan to be implemented in the event of an allergic reaction, including the names, doses, and methods of administration of any medications that the child should receive in the event of a reaction. The plan should include specific symptoms that would indicate the need to administer one or more medications;

b. Based on the child’s care plan, the child’s caregivers/teachers should receive training, demonstrate competence in, and implement measures for:
   1. Preventing exposure to the specific food(s) to which the child is allergic;
   2. Recognizing the symptoms of an allergic reaction;
   3. Treating allergic reactions;

c. Parents/guardians and staff should arrange for the facility to have necessary medications, proper storage of such medications, and the equipment and training to manage the child’s food allergy while the child is at the early care and education facility;

d. Caregivers/teachers should promptly and properly administer prescribed medications in the event of an allergic reaction according to the instructions in the care plan;

e. The facility should notify the parents/guardians immediately of any suspected allergic reactions, the ingestion of the problem food, or contact with the problem food, even if a reaction did not occur;

f. The facility should recommend to the family that the child’s primary care provider be notified if the child has required treatment by the facility for a food allergic reaction;

g. The facility should contact the emergency medical services system immediately whenever epinephrine has been administered;

h. Parents/guardians of all children in the child’s class should be advised to avoid any known allergens in class treats or special foods brought into the early care and education setting;

i. Individual child’s food allergies should be posted prominently in the classroom where staff can view and/or wherever food is served;

j. The written child care plan, a mobile phone, and the proper medications for appropriate treatment if the child develops an acute allergic reaction should be routinely carried on field trips or transport out of the early care and education setting.
Standard 4.3.1.3 Preparing, Feeding, and Storing Human Milk

Expressed human milk should be placed in a clean and sanitary bottle with a nipple that fits tightly or into an equivalent clean and sanitary sealed container to prevent spilling during transport to home or to the facility. Only cleaned and sanitized bottles, or their equivalent, and nipples should be used in feeding. The bottle or container should be properly labeled with the infant’s full name and the date and time the milk was expressed. The bottle or container should immediately be stored in the refrigerator on arrival.

The mother’s own expressed milk should only be used for her own infant. Likewise, infant formula should not be used for a breastfed infant without the mother’s written permission.

Bottles made of plastics containing BPA or phthalates should be avoided (labeled with #3, #6, or #7). Glass bottles or plastic bottles labeled BPA-free or with #1, #2, #4, or #5 are acceptable.

Non-frozen human milk should be transported and stored in the containers to be used to feed the infant, identified with a label which will not come off in water or handling, bearing the date of collection and child’s full name. The filled, labeled containers of human milk should be kept refrigerated. Human milk containers with significant amount of contents remaining (greater than one ounce) may be returned to the mother at the end of the day as long as the child has not fed directly from the bottle.

Frozen human milk may be transported and stored in single use plastic bags and placed in a freezer (not a compartment within a refrigerator but either a freezer with a separate door or a standalone freezer). Human milk should be defrosted in the refrigerator if frozen, and then heated briefly in bottle warmers or under warm running water so that the temperature does not exceed 98.6°F. If there is insufficient time to defrost the milk in the refrigerator before warming it, then it may be defrosted in a container of running cool tap water, very gently swirling the bottle periodically to evenly distribute the temperature in the milk. Some infants will not take their mother’s milk unless it is warmed to body temperature, around 98.6°F. The caregiver/teacher should check for the infant’s full name and the date on the bottle so that the oldest milk is used first. After warming, bottles should be mixed gently (not shaken) and the temperature of the milk tested before feeding.

Expressed human milk that presents a threat to an infant, such as human milk that is in an unsanitary bottle, is curdled, smells rotten, and/or has not been stored following the storage guidelines of the Academy of Breastfeeding Medicine as shown later in this standard, should be returned to the mother.
Some children around six months to a year of age may be developmentally ready to feed themselves and may want to drink from a cup. The transition from bottle to cup can come at a time when a child’s fine motor skills allow use of a cup. The caregiver/teacher should use a clean small cup without cracks or chips and should help the child to lift and tilt the cup to avoid spillage and leftover fluid. The caregiver/teacher and mother should work together on cup feeding of human milk to ensure the child is receiving adequate nourishment and to avoid having a large amount of human milk remaining at the end of feeding. Two to three ounces of human milk can be placed in a clean cup and additional milk can be offered as needed. Small amounts of human milk (about an ounce) can be discarded.

Human milk can be stored using the following guidelines from the Academy of Breastfeeding Medicine:

<table>
<thead>
<tr>
<th>Location</th>
<th>Temperature</th>
<th>Duration</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Countertop, table</td>
<td>Room temperature (up to 77°F or 25°C)</td>
<td>6-8 hours</td>
<td>Containers should be covered and kept as cool as possible; covering the container with a cool towel may keep milk cooler.</td>
</tr>
<tr>
<td>Insulated cooler bag</td>
<td>5°F – 39°F or -15°C – 4°C</td>
<td>24 hours</td>
<td>Keep ice packs in contact with milk containers at all times, limit opening cooler bag.</td>
</tr>
<tr>
<td>Refrigerator</td>
<td>39°F or 4°C</td>
<td>5 days</td>
<td>Store milk in the back of the main body of the refrigerator.</td>
</tr>
<tr>
<td>Freezer compartment of a refrigerator</td>
<td>5°F or -15°C</td>
<td>2 weeks</td>
<td>Store milk toward the back of the freezer, where temperature is most constant. Milk stored for longer durations in the ranges listed is safe, but some of the lipids in the milk undergo degradation resulting in lower quality.</td>
</tr>
<tr>
<td>Freezer compartment of refrigerator with separate doors</td>
<td>0°F or -18°C</td>
<td>3-6 months</td>
<td></td>
</tr>
<tr>
<td>Chest or upright deep freezer</td>
<td>-4°F or -20°C</td>
<td>6-12 months</td>
<td></td>
</tr>
</tbody>
</table>


From the Centers for Disease Control and Prevention Website: Proper handling and storage of human milk – Storage duration of fresh human milk for use with healthy full term infants. [http://www.cdc.gov/breastfeeding/recommendations/handling_breastmilk.htm](http://www.cdc.gov/breastfeeding/recommendations/handling_breastmilk.htm).
Standard 4.3.1.5 Preparing, Feeding, and Storing Infant Formula

Formula provided by parents/guardians or by the facility should come in a factory-sealed container. The formula should be of the same brand that is served at home and should be of ready-to-feed strength or liquid concentrate to be diluted using water from a source approved by the health department. Powdered infant formula, though it is the least expensive formula, requires special handling in mixing because it cannot be sterilized. The primary source for proper and safe handling and mixing is the manufacturer’s instructions that appear on the can of powdered formula. Before opening the can, hands should be washed. The can and plastic lid should be thoroughly rinsed and dried. Caregivers/teachers should read and follow the manufacturer’s directions. If instructions are not readily available, caregivers/teachers should obtain information from the World Health Organization’s Safe Preparation, Storage and Handling of Powdered Infant Formula Guidelines at http://www.who.int/foodsafety/publications/micro/pif2007/en/index.html (8). The local WIC program can also provide instructions.

Formula mixed with cereal, fruit juice, or any other foods should not be served unless the child’s primary care provider provides written documentation that the child has a medical reason for this type of feeding.

Iron-fortified formula should be refrigerated until immediately before feeding. For bottles containing formula, any contents remaining after a feeding should be discarded.

Bottles of formula prepared from powder or concentrate or ready-to-feed formula should be labeled with the child’s full name and time and date of preparation. Any prepared formula must be discarded within one hour after serving to an infant. Prepared powdered formula that has not been given to an infant should be covered, labeled with date and time of preparation and child’s full name, and may be stored in the refrigerator for up to twenty-four hours. An open container of ready-to-feed, concentrated formula, or formula prepared from concentrated formula, should be covered, refrigerated, labeled with date of opening and child’s full name, and discarded at forty-eight hours if not used (7,9). The caregiver/teacher should always follow manufacturer’s instructions for mixing and storing of any formula preparation.

Some infants will require specialized formula because of allergy, inability to digest certain formulas, or need for extra calories. The appropriate formula should always be available and should be fed as directed. For those infants getting supplemental calories, the formula may be prepared in a different way from the directions on the container. In those circumstances, either the family should provide the prepared formula or the caregiver/teacher should
receive special training, as noted in the infant’s care plan, on how to prepare the formula.

**Standard 4.3.1.9 Warming Bottles and Infant Foods**

Bottles and infant foods can be served cold from the refrigerator and do not have to be warmed. If a caregiver/teacher chooses to warm them, bottles should be warmed under running, warm tap water or by placing them in a container of water that is no warmer than 120°F. Bottles should not be left in a pot of water to warm for more than five minutes. Bottles and infant foods should never be warmed in a microwave oven.

Infant foods should be stirred carefully to distribute the heat evenly. A caregiver/teacher should not hold an infant while removing a bottle or infant food from the container of warm water or while preparing a bottle or stirring infant food that has been warmed in some other way. Only BPA-free plastic, plastic labeled #1, #2, #4 or #5, or glass bottles should be used.

If a slow-cooking device, such as a crock pot, is used for warming infant formula, human milk, or infant food, this slow-cooking device should be out of children’s reach, should contain water at a temperature that does not exceed 120°F, and should be emptied, cleaned, sanitized, and refilled with fresh water daily.

**Standard 4.3.1.11 Introduction of Age-Appropriate Solid Foods to Infants**

A plan to introduce age-appropriate solid foods (complementary foods) to infants should be made in consultation with the child’s parent/guardian and primary care provider. Age-appropriate solid foods may be introduced no sooner than when the child has reached the age of four months, but preferably six months and as indicated by the individual child’s nutritional and developmental needs.

For breastfed infants, gradual introduction of iron-fortified foods may occur no sooner than around four months, but preferably six months and to complement the human milk. Modification of basic food patterns should be provided in writing by the child’s primary care provider.

Evidence for introducing complementary foods in a specific order or rate is not available. The current best practice is that the first solid foods should be single-ingredient foods and should be introduced one at a time at two to seven-day intervals (1).

**Standard 4.5.0.6 Adult Supervision of Children Who Are Learning to Feed Themselves**

Children in mid-infancy who are learning to feed themselves should be supervised by an adult seated within arm’s reach of them at all times while they are being fed. Children over twelve months of age who can feed...
themselves should be supervised by an adult who is seated at the same table or within arm’s reach of the child’s highchair or feeding table. When eating, children should be within sight of an adult at all times.

**Standard 4.5.0.9 Hot Liquids and Foods**

Adults should not consume hot liquids above 120°F in child care areas (3). Hot liquids and hot foods should be kept out of the reach of infants, toddlers, and preschoolers. Hot liquids and foods should not be placed on a surface at a child’s level, at the edge of a table or counter, or on a tablecloth that could be yanked down. Appliances containing hot liquids, such as coffee pots and crock pots, should be kept out of the reach of children. Electrical cords from any appliance, including coffee pots, should not be allowed to hang within the reach of children. Food preparers should position pot handles toward the back of the stove and use only back burners when possible.

**Standard 4.5.0.10 Foods that Are Choking Hazards**

Caregivers/teachers should not offer to children under four years of age foods that are associated with young children’s choking incidents (round, hard, small, thick and sticky, smooth, compressible or dense, or slippery). Examples of these foods are hot dogs and other meat sticks (whole or sliced into rounds), raw carrot rounds, whole grapes, hard candy, nuts, seeds, raw peas, hard pretzels, chips, peanuts, popcorn, rice cakes, marshmallows, spoonfuls of peanut butter, and chunks of meat larger than can be swallowed whole. Food for infants should be cut into pieces one-quarter inch or smaller, food for toddlers should be cut into pieces one-half inch or smaller to prevent choking. In addition to the food monitoring, children should always be seated when eating to reduce choking hazards. Children should be supervised while eating, to monitor the size of food and that they are eating appropriately (for example, not stuffing their mouths full).

**Standard 4.8.0.1 Food Preparation Area**

The food preparation area of the kitchen should be separate from eating, play, laundry, toilet, and bathroom areas and from areas where animals are permitted. The food preparation area should not be used as a passageway while food is being prepared. Food preparation areas should be separated by a door, gate, counter, or room divider from areas the children use for activities unrelated to food, except in small family child care homes when separation may limit supervision of children.

Infants and toddlers should not have access to the kitchen in child care centers. Access by older children to the kitchen of centers should be permitted only when supervised by staff members who have been certified by the nutritionist/registered dietitian or the center director as qualified to follow the facility’s sanitation and safety procedures.
In all types of child care facilities, children should never be in the kitchen unless they are directly supervised by a caregiver/teacher. Children of preschool-age and older should be restricted from access to areas where hot food is being prepared. School-age children may engage in food preparation activities with adult supervision in the kitchen or the classroom. Parents/guardians and other adults should be permitted to use the kitchen only if they know and follow the food safety rules of the facility. The facility should check with local health authorities about any additional regulations that apply.

**Standard 4.8.0.3 Maintenance of Food Service Surfaces and Equipment**

All surfaces that come into contact with food, including tables and countertops, as well as floors and shelving in the food preparation area should be in good repair, free of cracks or crevices, and should be made of smooth, nonporous material that is kept clean and sanitized. All kitchen equipment should be clean and should be maintained in operable condition according to the manufacturer’s guidelines for maintenance and operation. The facility should maintain an inventory of food service equipment that includes the date of purchase, the warranty date, and a history of repairs.

**Standard 4.9.0.2 Staff Restricted from Food Preparation and Handling**

Anyone who has signs or symptoms of illness, including vomiting, diarrhea, and infectious skin sores that cannot be covered, or who potentially or actually is infected with bacteria, viruses or parasites that can be carried in food, should be excluded from food preparation and handling. Staff members may not contact exposed, ready-to-eat food with their bare hands and should use suitable utensils such as deli tissue, spatulas, tongs, single-use gloves, or dispensing equipment. No one with open or infected skin eruptions should work in the food preparation area unless the injuries are covered with nonporous (such as latex or vinyl), single use gloves.

In centers and large family child care homes, staff members who are involved in the process of preparing or handling food should not change diapers. Staff members who work with diapered children should not prepare or serve food for older groups of children. When staff members who are caring for infants and toddlers are responsible for changing diapers, they should handle food only for the infants and toddlers in their groups and only after thoroughly washing their hands. Caregivers/teachers who prepare food should wash their hands carefully before handling any food, regardless of whether they change diapers. When caregivers/teachers must handle food, staffing assignments should be made to foster completion of the food handling activities by caregivers/teachers of older children, or by caregivers/teachers of infants and toddlers before the caregiver/teacher assumes other caregiving duties for that day. Aprons worn in the food preparation area should be changed after handling diapers or after contact with food.
service area must be clean and should be removed when diaper changing or when using the toilet.

**Standard 4.9.0.3 Precautions for a Safe Food Supply**

All foods stored, prepared, or served should be safe for human consumption by observation and smell (1-2). The following precautions should be observed for a safe food supply:

a. Home-canned food; food from dented, rusted, bulging, or leaking cans, and food from cans without labels should not be used;

b. Foods should be inspected daily for spoilage or signs of mold, and foods that are spoiled or moldy should be promptly and appropriately discarded;

c. Meat should be from government-inspected sources or otherwise approved by the governing health authority (3);

d. All dairy products should be pasteurized and Grade A where applicable;

e. Raw, unpasteurized milk, milk products; unpasteurized fruit juices; and raw or undercooked eggs should not be used. Freshly squeezed fruit or vegetable juice prepared just prior to serving in the child care facility is permissible;

f. Unless a child’s health care professional documents a different milk product, children from twelve months to two years of age should be served only human milk, formula, whole milk or 2% milk (6). Note: For children between twelve months and two years of age for whom overweight or obesity is a concern or who have a family history of obesity, dyslipidemia, or CVD, the use of reduced-fat milk is appropriate only with written documentation from the child’s primary health care professional (4). Children two years of age and older should be served skim or 1% milk. If cost-saving is required to accommodate a tight budget, dry milk and milk products may be reconstituted in the facility for cooking purposes only, provided that they are prepared, refrigerated, and stored in a sanitary manner, labeled with the date of preparation, and used or discarded within twenty-four hours of preparation;

g. Meat, fish, poultry, milk, and egg products should be refrigerated or frozen until immediately before use (5);

h. Frozen foods should be defrosted in one of four ways: In the refrigerator; under cold running water; as part of the cooking process, or by removing food from packaging and using the defrost setting of a microwave oven (5). Note: Frozen human milk should not be defrosted in the microwave;

i. Frozen foods should never be defrosted by leaving them at room temperature or standing in water that is not kept at refrigerator temperature (5);
j. All fruits and vegetables should be washed thoroughly with water prior to use (5);

k. Food should be served promptly after preparation or cooking or should be maintained at temperatures of not less than 135°F for hot foods and not more than 41°F for cold foods (12);

l. All opened moist foods that have not been served should be covered, dated, and maintained at a temperature of 41°F or lower in the refrigerator or frozen in the freezer, verified by a working thermometer kept in the refrigerator or freezer (12);

m. Fully cooked and ready-to-serve hot foods should be held for no longer than thirty minutes before being served, or promptly covered and refrigerated;

n. Pasteurized eggs or egg products should be substituted for raw eggs in the preparation of foods such as Caesar salad, mayonnaise, meringue, eggnog, and ice cream. Pasteurized eggs or egg products should be substituted for recipes in which more than one egg is broken and the eggs are combined, unless the eggs are cooked for an individual child at a single meal and served immediately, such as in omelets or scrambled eggs; or the raw eggs are combined as an ingredient immediately before baking and the eggs are fully cooked to a ready-to-eat form, such as a cake, muffin or bread;

o. Raw animal foods should be fully cooked to heat all parts of the food to a temperature and for a time of; 145°F or above for fifteen seconds for fish and meat; 160°F for fifteen seconds for chopped or ground fish, chopped or ground meat or raw eggs; or 165°F or above for fifteen seconds for poultry or stuffed fish, stuffed meat, stuffed pasta, stuffed poultry or stuffing containing fish, meat or poultry.
Chapter 5: Facilities, Supplies, Equipment, and Environmental Health

Standard 5.1.1.2 Inspection of Buildings

Newly constructed, renovated, remodeled, or altered buildings should be inspected by a public inspector to assure compliance with applicable building and fire codes before the building can be made accessible to children.

**TYPE OF FACILITY:** Center

Standard 5.1.1.3 Compliance with Fire Prevention Code

Every twelve months, the child care facility should obtain written documentation to submit to the regulatory licensing authority that the facility complies with a state-approved or nationally recognized Fire Prevention Code. If available, this documentation should be obtained from a fire prevention official with jurisdiction where the facility is located. Where fire safety inspections or a Fire Prevention Code applicable to child care centers is not available from local authorities, the facility should arrange for a fire safety inspection by an inspector who is qualified to conduct such inspections using the National Fire Protection Association’s NFPA 101: Life Safety Code.

**TYPE OF FACILITY:** Center

Standard 5.1.1.5 Environmental Audit of Site Location

An environmental audit should be conducted before construction of a new building; renovation or occupation of an older building; or after a natural disaster, to properly evaluate and, where necessary, remediate or avoid sites where children’s health could be compromised (1,3).

The environmental audit should include assessments of:

a. Potential air, soil, and water contamination on child care facility sites and outdoor play spaces;
b. Potential toxic or hazardous materials in building construction; and
c. Potential safety hazards in the community surrounding the site.

A written environmental audit report that includes any remedial action taken should be kept on file.

Standard 5.1.3.2 Possibility of Exit from Windows

All windows in areas used by children under five years of age should be constructed, adapted, or adjusted to limit the exit opening accessible to children to less than four inches, or be otherwise protected with guards that prevent exit by a child, but that do not block outdoor light. Where such windows are required by building or fire codes to provide for emergency
rescue and evacuation, the windows and guards, if provided, should be equipped to enable staff to release the guard and open the window fully when evacuation or rescue is required. Opportunities should be provided for staff to practice opening these windows, and such release should not require the use of tools or keys. Children should be given information about these windows, relevant safety rules, as well as what will happen if the windows need to be opened for an evacuation.

**Standard 5.1.4.1 Alternate Exits and Emergency Shelter**

Each building or structure, new or old, should be provided with a minimum of two exits, at different sides of the building or home, leading to an open space at ground level. If the basement in a small family child care home is being used, one exit must lead directly to the outside. Exits should be unobstructed, allowing occupants to escape to an outside door or exit stair enclosure in case of fire or other emergency. Each floor above or below ground level used for child care should have at least two unobstructed exits that lead to an open area at ground level and thereafter to an area that meets safety requirements for a child care indoor or outdoor area. Children should remain there until their parents/guardians can pick them up, if reentry into the facility is not possible.

Entrance and exit routes should be reviewed and approved by the applicable fire inspector. Exiting should meet all the requirements of the current edition of the NFPA 101: Life Safety Code from the National Fire Protection Association (NFPA).

**Standard 5.1.5.4 Guards at Stairway Access Openings**

Securely installed, effective guards (such as gates) should be provided at the top and bottom of each open stairway in facilities where infants and toddlers are in care. Gates should have latching devices that adults (but not children) can open easily in an emergency. “Pressure gates” or accordion gates should not be used. Gate design should not aid in climbing. Gates at the top of stairways should be hardware mounted (e.g., to the wall) for stability. Basement stairways should be shut off from the main floor level by a full door. This door should be self-closing and should be kept locked to entry when the basement is not in use. No door should be locked to prohibit exit at any time.

**Standard 5.1.6.6 Guardrails and Protective Barriers**

Guardrails, a minimum of thirty-six inches in height, should be provided at open sides of stairs, ramps, and other walking surfaces (e.g., landings, balconies, porches) from which there is more than a thirty-inch vertical distance to fall. Spaces below the thirty-six inches height guardrail should be further divided with intermediate rails or balusters as detailed in the next paragraph.

National Health and Safety Performance Standards
For preschoolers, bottom guardrails greater than nine inches but less or equal to twenty-three inches above the floor should be provided for all porches, landings, balconies, and similar structures. For school age children, bottom guardrails should be greater than nine inches but less or equal to twenty inches above the floor, as specified above.

For infants and toddlers, protective barriers should be less than three and one-half inches above the floor, as specified above. All spaces in guardrails should be less than three and a half inches. All spaces in protective barriers should be less than three and one-half inches. If spaces do not meet the specifications as listed above, a protective material sufficient to prevent the passing of a three and one-half inch diameter sphere should be provided.

Where practical or otherwise required by applicable codes, guardrails should be a minimum of forty-two inches in height to help prevent falls over the open side by staff and other adults in the child care facility.

**Standard 5.2.1.1 Fresh Air**

As much fresh outdoor air as possible should be provided in rooms occupied by children. Windows should be opened whenever weather and the outdoor air quality permits or when children are out of the room (1). When windows are not kept open, rooms should be ventilated, as specified in Standards 5.2.1.1-5.2.1.6. The specified rates at which outdoor air must be supplied to each room within the facility range from fifteen to sixty cubic feet per minute per person (cfm/p). The rate depends on the activities that normally occur in that room.

**Standard 5.2.1.10 Gas, Oil, or Kerosene Heaters, Generators, Portable Gas Stoves, and Charcoal and Gas Grills**

Unvented gas or oil heaters and portable open-flame kerosene space heaters should be prohibited. Gas cooking appliances, including portable gas stoves, should not be used for heating purposes. Charcoal grills should not be used for space heating or any other indoor purposes.

Heat in units that involve flame should be vented properly to the outside and should be supplied with a source of combustion air that meets the manufacturer’s installation requirements.

**Standard 5.2.1.11 Portable Electric Space Heaters**

Portable electric space heaters should:

- a. Be attended while in use and be off when unattended;
- b. Be inaccessible to children;
- c. Have protective covering to keep hands and objects away from the electric heating element;

National Health and Safety Performance Standards
d. Bear the safety certification mark of a nationally recognized testing laboratory;
e. Be placed on the floor only and at least three feet from curtains, papers, furniture, and any flammable object;
f. Be properly vented, as required for proper functioning;
g. Be used in accordance with the manufacturer’s instructions;
h. Not be used with an extension cord.

The heater cord should be inaccessible to children as well.

**Standard 5.2.4.2 Safety Covers and Shock Protection Devices for Electrical Outlets**

All electrical outlets accessible to children who are not yet developmentally at a kindergarten grade level of learning should be a type called “tamper-resistant electrical outlets.” These types of outlets look like standard wall outlets but contain an internal shutter mechanism that prevents children from sticking objects like hairpins, keys, and paperclips into the receptacle (2). This spring-loaded shutter mechanism only opens when equal pressure is applied to both shutters such as when an electrical plug is inserted (2,3).

In existing child care facilities that do not have “tamper-resistant electrical outlets,” outlets should have “safety covers” that are attached to the electrical outlet by a screw or other means to prevent easy removal by a child. “Safety plugs” should not be used since they can be removed from an electrical outlet by children (2,3).

All newly installed or replaced electrical outlets that are accessible to children should use “tamper-resistant electrical outlets.”

In areas where electrical products might come into contact with water, a special type of outlet called Ground Fault Circuit Interrupters (GFCIs) should be installed (2). A GFCI is designed to trip before a deadly electrical shock can occur (1). To ensure that GFCIs are functioning correctly, they should be tested at least monthly (2). GFCIs are also available in a tamper-resistant design.

**Standard 5.2.4.4 Location of Electrical Devices Near Water**

No electrical device or apparatus accessible to children should be located so it could be plugged into an electrical outlet while a person is in contact with a water source, such as a sink, tub, shower area, water table, or swimming pool.

**Standard 5.2.5.1 Smoke Detection Systems and Smoke Alarms**

In centers with new installations, a smoke detection system (such as hardwired system detectors with battery back-up system and control panel) or National Health and Safety Performance Standards
monitored wireless battery operated detectors that automatically signal an alarm through a central control panel when the battery is low or when the detector is triggered by a hazardous condition should be installed with placement of the smoke detectors in the following areas:

a. Each story in front of doors to the stairway;
b. Corridors of all floors;
c. Lounges and recreation areas;
d. Sleeping rooms.

In large and small family child care homes, smoke alarms that receive their operating power from the building electrical system or are of the wireless signal-monitored-alarm system type should be installed. Battery-operated smoke alarms should be permitted provided that the facility demonstrates to the fire inspector that testing, maintenance, and battery replacement programs ensure reliability of power to the smoke alarms and signaling of a monitored alarm when the battery is low and that retrofitting the facility to connect the smoke alarms to the electrical system would be costly and difficult to achieve.

Facilities with smoke alarms that operate using power from the building electrical system should keep a supply of batteries and battery-operated detectors for use during power outages.

**Standard 5.2.6.3 Testing for Lead and Copper Levels in Drinking Water**

Drinking water, including water in drinking fountains, should be tested and evaluated in accordance with the assistance of the local health authority or state drinking water program to determine whether lead and copper levels are safe.

**Standard 5.2.7.6 Storage and Disposal of Infectious and Toxic Wastes**

Infectious and toxic wastes should be stored separately from other wastes, and should be disposed of in a manner approved by the regulatory health authority.

**Standard 5.2.8.1 Integrated Pest Management**

Facilities should adopt an integrated pest management program (IPM) to ensure long-term, environmentally sound pest suppression through a range of practices including pest exclusion, sanitation and clutter control, and elimination of conditions that are conducive to pest infestations. IPM is a simple, common-sense approach to pest management that eliminates the root causes of pest problems, providing safe and effective control of insects, weeds, rodents, and other pests while minimizing risks to human health and the environment (2, 4).
Pest Prevention: Facilities should prevent pest infestations by ensuring sanitary conditions. This can be done by eliminating pest breeding areas, filling in cracks and crevices; holes in walls, floors, ceilings and water leads; repairing water damage; and removing clutter and rubbish on the premises (5).

Pest Monitoring: Facilities should establish a program for regular pest population monitoring and should keep records of pest sightings and sightings of indicators of the presence of pests (e.g., gnaw marks, frass, rub marks).

Pesticide Use: If physical intervention fails to prevent pest infestations, facility managers should ensure that targeted, rather than broadcast applications of pesticides are made, beginning with the products that pose least exposure hazard first, and always using a pesticide applicator who has the licenses or certifications required by state and local laws.

Facility managers should follow all instructions on pesticide product labels and should not apply any pesticide in a manner inconsistent with label instructions. Material Safety Data Sheets (MSDS) are available from the product manufacturer or a licensed exterminator and should be on file at the facility. Facilities should ensure that pesticides are never applied when children are present and that re-entry periods are adhered to.

Records of all pesticides applications (including type and amount of pesticide used), timing and location of treatment, and results should be maintained either on-line or in a manner that permits access by facility managers and staff, state inspectors and regulatory personnel, parents/guardians, and others who may inquire about pesticide usage at the facility.

Facilities should avoid the use of sprays and other volatilizing pesticide formulations. Pesticides should be applied in a manner that prevents skin contact and any other exposure to children or staff members and minimizes odors in occupied areas. Care should be taken to ensure that pesticide applications do not result in pesticide residues accumulating on tables, toys, and items mouthed or handled by children, or on soft surfaces such as carpets, upholstered furniture, or stuffed animals with which children may come in direct contact (3).

Following the use of pesticides, herbicides, fungicides, or other potentially toxic chemicals, the treated area should be ventilated for the period recommended on the product label.

Notification: Notification should be given to parents/guardians and staff before using pesticides, to determine if any child or staff member is sensitive to the product. A member of the child care staff should directly observe the application to be sure that toxic chemicals are not applied on surfaces with which children or staff may come in contact.
Registry: Child care facilities should provide the opportunity for interested staff and parents/guardians to register with the facility if they want to be notified about individual pesticide applications before they occur.

Warning Signs: Child care facilities must post warning signs at each area where pesticides will be applied. These signs must be posted forty-eight hours before and seventy-two hours after applications and should be sufficient to restrict uninformed access to treated areas.

Record Keeping: Child care facilities should keep records of pesticide use at the facility and make the records available to anyone who asks. Record retention requirements vary by state, but federal law requires records to be kept for two years (7). It is a good idea to retain records for a minimum of three years.

Pesticide Storage: Pesticides should be stored in their original containers and in a locked room or cabinet accessible only to authorized staff. No restricted-use pesticides should be stored or used on the premises except by properly licensed persons. Banned, illegal, and unregistered pesticides should not be used.

**Standard 5.2.9.1 Use and Storage of Toxic Substances**

The following items should be used as recommended by the manufacturer and should be stored in the original labeled containers:

- a. Cleaning materials;
- b. Detergents;
- c. Automatic dishwasher detergents;
- d. Aerosol cans;
- e. Pesticides;
- f. Health and beauty aids;
- g. Medications;
- h. Lawn care chemicals;
- i. Other toxic materials.

Material Safety Data Sheets (MSDS) must be available onsite for each hazardous chemical that is on the premises.

These substances should be used only in a manner that will not contaminate play surfaces, food, or food preparation areas, and that will not constitute a hazard to the children or staff. When not in active use, all chemicals used inside or outside should be stored in a safe and secure manner in a locked room or cabinet, fitted with a child-resistant opening device, inaccessible to children, and separate from stored medications and food.

Chemicals used in lawn care treatments should be limited to those listed for use in areas that can be occupied by children.
Medications can be toxic if taken by the wrong person or in the wrong dose. Medications should be stored safely (see Standard 3.6.3.1) and disposed of properly (see Standard 3.6.3.2).

The telephone number for the poison center should be posted in a location where it is readily available in emergency situations (e.g., next to the telephone). Poison centers are open twenty-four hours a day, seven days a week, and can be reached at 1-800-222-1222.

**Standard 5.2.9.2 Use of a Poison Center**

The poison center should be called for advice about any exposure to toxic substances, or any potential poisoning emergency. The national help line for the poison center is 1-800-222-1222, and specialists will link the caregiver/teacher with their local poison center. The advice should be followed and documented in the facility’s files. The caregiver/teacher should be prepared for the call by having the following information for the poison center specialist:

- The child’s age and sex;
- The substance involved;
- The estimated amount;
- The child’s condition;
- The time elapsed since ingestion or exposure.

The caregiver/teacher should not induce vomiting unless instructed by the poison center.

**Standard 5.2.9.3 Informing Staff Regarding Presence of Toxic Substances**

Employers should provide staff with hazard information, including access to and review of the Material Safety Data Sheets (MSDS) as required by the Occupational Safety and Health Administration (OSHA), about the presence of toxic substances such as formaldehyde, cleaning and sanitizing supplies, insecticides, herbicides, and other hazardous chemicals in use in the facility. Staff should always read the label prior to use to determine safety in use. For example, toxic products regulated by the Environmental Protection Agency (EPA) will have an EPA signal word of CAUTION, WARNING, or DANGER. Where nontoxic substitutes are available, these nontoxic substitutes should be used instead of toxic chemicals. If a nontoxic product is not available, caregivers/teachers should use the least toxic product for the job. A CAUTION label is safer than a WARNING label, which is safer than a DANGER label.

**TYPE OF FACILITY:** Center, Large Family Child Care Home
Standard 5.2.9.4 Radon Concentrations
Radon concentrations inside a home or building used for child care must be less than four picocuries per liter of air. All facilities must be tested for the presence of radon, according to U.S. Environmental Protection Agency (EPA) testing protocols for long-term testing (i.e., greater than ninety days in duration using alpha-track or electret test devices).

Standard 5.2.9.5 Carbon Monoxide Detectors
Carbon monoxide detector(s) should be installed in child care settings if one of the following guidelines is met:

a. The child care program uses any sources of coal, wood, charcoal, oil, kerosene, propane, natural gas, or any other product that can produce carbon monoxide indoors or in an attached garage;

b. If detectors are required by state/local law or state licensing agency.

Facilities must meet state or local laws regarding carbon monoxide detectors. Detectors should be tested monthly. Batteries should be changed at least yearly. Detectors should be replaced at least every five years.

Standard 5.2.9.13 Testing for Lead
In all centers, both exterior and interior surfaces covered by paint with lead levels of 0.009% or 90 ppm and above, and accessible to children, should be removed by a safe chemical or physical means or made inaccessible to children, regardless of the condition of the surface.

In large and small family child care homes, flaking or deteriorating lead-based paint on any surface accessible to children should be removed or abated according to health department regulations. Where lead paint is removed, the surface should be refinished with lead-free paint or nontoxic material. Sanding, scraping, or burning of lead-based paint surfaces should be prohibited. Children and pregnant women should not be present during lead renovation or lead abatement activities.

Any surface and the grounds around and under surfaces that children use at a child care facility, including dirt and grassy areas should be tested for excessive lead in a location designated by the health department. Caregivers/teachers should check the U.S. Consumer Product Safety Commission’s Website, http://www.cpsc.gov, for warnings of potential lead exposure to children and recalls of play equipment, toys, jewelry used for play, imported vinyl mini-blinds and food contact products. If they are found to have toxic levels, corrective action should be taken to prevent exposure to lead at the facility. Only nontoxic paints should be used.
**Standard 5.3.1.1 Safety of Equipment, Materials, and Furnishings**

Equipment, materials, furnishings, and play areas should be sturdy, safe, and in good repair and should meet the recommendations of the U.S. Consumer Product Safety Commission (CPSC) for control of the following safety hazards:

a. Openings that could entrap a child’s head or limbs;
b. Elevated surfaces that are inadequately guarded;
c. Lack of specifiedsurfacing and fall zonesunder and aroundclimbable equipment;
d. Mismatched size and design of equipment for the intended users;
e. Insufficient spacing between equipment;
f. Tripping hazards;
g. Components that can pinch, shear, or crush body tissues;
h. Equipment that is known to be of a hazardous type;
i. Sharp points or corners;
j. Splinters;
k. Protruding nails, bolts, or other components that could entangle clothing or snag skin;
l. Loose, rusty parts;
m. Hazardous small parts that may become detached during normal use or reasonably foreseeable abuse of the equipment and that present a choking, aspiration, or ingestion hazard to a child;
n. Strangulation hazards (e.g., straps, strings, etc.);
o. Flaking paint;
p. Paint that contains lead or other hazardous materials;
q. Tip-over hazards, such as chests, bookshelves, and televisions.

**Standard 5.3.1.12 Availability and Use of a Telephone or Wireless Communication Device**

The facility should provide at all times at least one workingnon-pay telephone or wireless communication device for general and emergency use:

a. On the premises of the child care facility;
b. In each vehicle used when transporting children;
c. On field trips.

Drivers, while transporting children should not operate a motor vehicle while using a mobile telephone or wireless communications device when the vehicle is in motion or a part of traffic, with the exception of use of a navigational system or global positioning system device.
Standard 5.4.5.2 Crib

Facilities should check each crib before its purchase and use to ensure that it is in compliance with the current U.S. Consumer Product Safety Commission (CPSC) and ASTM safety standards.

Recalled or “second-hand” cribs should not be used or stored in the facility. When it is determined that a crib is no longer safe for use in the facility, it should be dismantled and disposed of appropriately.

Staff should only use cribs for sleep purposes and should ensure that each crib is a safe sleep environment. No child of any age should be placed in a crib for a time-out or for disciplinary reasons. When an infant becomes large enough or mobile enough to reach crib latches or potentially climb out of a crib, they should be transitioned to a different sleeping environment (such as a cot or sleeping mat).

Each crib should be identified by brand, type, and/or product number and relevant product information should be kept on file (with the same identification information) as long as the crib is used or stored in the facility.

Staff should inspect each crib before each use to ensure that hardware is tightened and that there are not any safety hazards. If a screw or bolt cannot be tightened securely, or there are missing or broken screws, bolts, or mattress support hangers, the crib should not be used.

Safety standards document that cribs used in facilities should be made of wood, metal, or plastic. Crib slats should be spaced no more than two and three-eighths inches apart, with a firm mattress that is fitted so that no more than two fingers can fit between the mattress and the crib side in the lowest position. The minimum height from the top of the mattress to the top of the crib rail should be twenty inches in the highest position. Cribs with drop sides should not be used. The crib should not have corner post extensions (over one-sixteenth inch). The crib should have no cutout openings in the head board or footboard structure in which a child’s head could become entrapped. The mattress support system should not be easily dislodged from any point of the crib by an upward force from underneath the crib. All cribs should meet the ASTM F1169-10a Standard Consumer Safety Specification for Full-Size Baby Cribs, F406-10b Standard Consumer Safety Specification for Non-Full-Size Baby Cribs/Play Yards, or the CPSC 16 CFR 1219, 1220, and 1500 – Safety Standards for Full-Size Baby Cribs and Non-Full-Size Baby Cribs; Final Rule.

Cribs should be placed away from window blinds or draperies.

As soon as a child can stand up, the mattress should be adjusted to its lowest position. Once a child can climb out of his/her crib, the child should be moved to a bed. Children should never be kept in their crib by placing, tying, or wedging various fabric, mesh, or other strong coverings over the top of the crib.
Cribs intended for evacuation purpose should be of a design and have wheels that are suitable for carrying up to five non-ambulatory children less than two years of age to a designated evacuation area. This crib should be used for evacuation in the event of fire or other emergency. The crib should be easily moveable and should be able to fit through the designated fire exit.

**Standard 5.5.0.6 Inaccessibility to Matches, Candles, and Lighters**

Matches, candles, and lighters should not be accessible to children.

**Standard 5.5.0.7 Storage of Plastic Bags**

Plastic bags, whether intended for storage, trash, diaper disposal, or any other purpose, should be stored out of reach of children.

**Standard 5.5.0.8 Firearms**

Centers should not have any firearms, pellet or BB guns (loaded or unloaded), darts, bows and arrows, cap pistols, stun guns, paint ball guns, or objects manufactured for play as toy guns within the premises at any time. If present in a small or large family child care home, these items must be unloaded, equipped with child protective devices, and kept under lock and key with the ammunition locked separately in areas inaccessible to the children. Parents/guardians should be informed about this policy.

**Standard 5.6.0.1 First Aid and Emergency Supplies**

The facility should maintain first aid and emergency supplies in each location where children are cared for. The first aid kit or supplies should be kept in a closed container, cabinet, or drawer that is labeled and stored in a location known to all staff, accessible to staff at all times, but locked or otherwise inaccessible to children. When children leave the facility for a walk or to be transported, a designated staff member should bring a transportable first aid kit. In addition, a transportable first aid kit should be in each vehicle that is used to transport children to and from a child care facility.

First aid kits or supplies should be restocked after use. An inventory of first aid supplies should be conducted at least monthly. A log should be kept that lists the date that each inventory was conducted, verification that expiration dates of supplies were checked, location of supplies (i.e., in the facility supply, transportable first aid kit(s), etc.), and the legal name/signature of the staff member who completed the inventory.

The first aid kit should contain at least the following items:

a. Disposable nonporous, latex-free or non-powdered latex gloves (latex-free recommended);

b. Scissors;
c. Tweezers;
d. Non-glass, non-mercury thermometer to measure a child’s temperature;
e. Bandage tape;
f. Sterile gauze pads;
g. Flexible roller gauze;
h. Triangular bandages;
i. Safety pins;
j. Eye patch or dressing;
k. Pen/pencil and note pad;
l. Cold pack;
m. Current American Academy of Pediatrics (AAP) standard first aid chart or equivalent first aid guide such as the AAP Pediatric First Aid For Caregivers and Teachers (PedFACTS) Manual;
n. Coins for use in a pay phone and cell phone;
o. Water (two liters of sterile water for cleaning wounds or eyes);
p. Liquid soap to wash injury and hand sanitizer, used with supervision, if hands are not visibly soiled or if no water is present;
q. Tissues;
r. Wipes;
s. Individually wrapped sanitary pads to contain bleeding of injuries;
t. Adhesive strip bandages, plastic bags for cloths, gauze, and other materials used in handling blood;
u. Flashlight;
v. Whistle;
w. Battery-powered radio (1).

When children walk or are transported to another location, the transportable first aid kit should include ALL items listed above AND the following emergency information/items:

a. List of children in attendance (organized by caregiver/teacher they are assigned to) and their emergency contact information (i.e., parents/guardian/emergency contact home, work, and cell phone numbers);
b. Special care plans for children who have them;
c. Emergency medications or supplies as specified in the special care plans;
d. List of emergency contacts (i.e., location information and phone numbers for the Poison Center, nearby hospitals or other emergency care clinics, and other community resource agencies);
e. Maps;
f. Written transportation policy and contingency plans.
Standard 5.7.0.4 Inaccessibility of Hazardous Equipment

Any hazardous equipment should be made inaccessible to children by barriers, or removed until rendered safe or replaced. The barriers should not pose any hazard.
Chapter 6: Play Areas/Playgrounds and Transportation

**Standard 6.1.0.6 Location of Play Areas Near Bodies of Water**
Outside play areas should be free from the following bodies of water:

- a. Unfenced swimming and wading pools;
- b. Ditches;
- c. Quarries;
- d. Canals;
- e. Excavations;
- f. Fish ponds;
- g. Water retention or detention basins;
- h. Other bodies of water.

**Standard 6.1.0.8 Enclosures for Outdoor Play Areas**
The outdoor play area should be enclosed with a fence or natural barriers. Fences and barriers should not prevent the observation of children by caregivers/teachers. If a fence is used, it should conform to applicable local building codes in height and construction. Fence posts should be outside the fence where allowed by local building codes. These areas should have at least two exits, with at least one being remote from the buildings.

Gates should be equipped with self-closing and positive self-latching closure mechanisms. The latch or securing device should be high enough or of a type such that children cannot open it. The openings in the fence and gates should be no larger than three and one-half inches. The fence and gates should be constructed to discourage climbing. Play areas should be secured against inappropriate use when the facility is closed.

Wooden fences and playground structures created out of wood should be tested for chromated copper arsenate (CCA). Wooden fences and playground structures created out of wood that is found to contain CCA should be sealed with an oil-based outdoor sealant annually.

**Standard 6.2.1.9 Entrapment Hazards of Play Equipment**
All openings in pieces of play equipment should be designed too large for a child’s head to get stuck in or too small for a child’s body to fit into, in order to prevent entrapment and strangulation. Openings in exercise rings (overhead hanging rings such as those used in a ring trek or ring ladder) should be smaller than three and one-half inches or larger than nine inches in diameter. Rings on long chains are prohibited. A play structure should have no openings with a dimension between three and one-half inches and nine inches. In particular, side railings, stairs, and other locations where a
child might slip or try to climb through should be checked for appropriate dimensions.

Protrusions such as pipes, wood ends, or long bolts that may catch a child’s clothing are prohibited. Distances between two vertical objects that are positioned near each other should be less than three and one-half inches to prevent entrapment of a child’s head. No opening should have a vertical angle of less than fifty-five degrees. To prevent entrapment of fingers, openings should not be larger than three-eighths inch or smaller than one inch. A Certified Playground Safety Inspector (CPSI) is specially trained to find and measure various play equipment hazards.

**Standard 6.2.3.1 Prohibited Surfaces for Placing Climbing Equipment**

Equipment used for climbing should not be placed over, or immediately next to, hard surfaces such as asphalt, concrete, dirt, grass, or flooring covered by carpet or gym mats not intended for use as surfacing for climbing equipment.

All pieces of playground equipment should be placed over and surrounded by a shock-absorbing surface. This material may be either the unitary or the loose-fill type, as defined by the U.S. Consumer Product Safety Commission (CPSC) guidelines and ASTM International (ASTM) standards, extending at least six feet beyond the perimeter of the stationary equipment (1,2). These shock-absorbing surfaces must conform to the standard stating that the impact of falling from the height of the structure will be less than or equal to peak deceleration of 200G and a Head Injury Criterion (HIC) of 1000 and should be maintained at all times (3). Organic materials that support colonization of molds and bacteria should not be used. All loose fill materials must be raked to retain their proper distribution, shock-absorbing properties and to remove foreign material. This standard applies whether the equipment is installed outdoors or indoors.

**Standard 6.2.4.4 Trampolines**

Trampolines, both full and mini-size, should be prohibited from being used as part of the child care program activities both on-site and during field trips.

**Standard 6.2.5.1 Inspection of Indoor and Outdoor Play Areas and Equipment**

The indoor and outdoor play areas and equipment should be inspected daily for the following:

a. Missing or broken parts;

b. Protrusion of nuts and bolts;

c. Rust and chipping or peeling paint;

d. Sharp edges, splinters, and rough surfaces;

National Health and Safety Performance Standards
e. Stability of handholds;
f. Visible cracks;
g. Stability of non-anchored large play equipment (e.g., playhouses);
h. Wear and deterioration.

Observations should be documented and filed, and the problems corrected.

Facilities should conduct a monthly inspection as outlined in Appendix EE, America’s Playgrounds Safety Report Card.

**Standard 6.3.1.1 Enclosure of Bodies of Water**

All water hazards, such as pools, swimming pools, stationary wading pools, ditches, fish ponds, and water retention or detention basins should be enclosed with a fence that is four to six feet high or higher and comes within three and one-half inches of the ground. Openings in the fence should be no greater than three and one-half inches. The fence should be constructed to discourage climbing and kept in good repair.

If the fence is made of horizontal and vertical members (like a typical wooden fence) and the distance between the tops of the horizontal parts of the fence is less than forty-five inches, the horizontal parts should be on the swimming pool side of the fence. The spacing of the vertical members should not exceed one and three-quarters inches.

For a chain link fence, the mesh size should not exceed one and one-quarter square inches.

Exit and entrance points should have self-closing, positive latching gates with locking devices a minimum of fifty-five inches from the ground.

A wall of the child care facility should not constitute one side of the fence unless the wall has no openings capable of providing direct access to the pool (such as doors, windows, or other openings).

If the facility has a water play area, the following requirements should be met:

a. Water play areas should conform to all state and local health regulations;
b. Water play areas should not include hidden or enclosed spaces;
c. Spray areas and water-collecting areas should have a non-slip surface, such as asphalt;
d. Water play areas, particularly those that have standing water, should not have sudden changes in depth of water;
e. Drains, streams, water spouts, and hydrants should not create strong suction effects or water-jet forces;
f. All toys and other equipment used in and around the water play area should be made of sturdy plastic or metal (no glass should be permitted);
g. Water play areas in which standing water is maintained for more than twenty-four hours should be treated according to Standard 6.3.4.1, and inspected for glass, trash, animal excrement, and other foreign material.

**Standard 6.3.1.4 Safety Covers for Swimming Pools**

When not in use, in-ground and above-ground swimming pools should be covered with a safety cover that meets or exceeds the ASTM International (ASTM) standard “F1346-03: Standard performance specification for safety covers and labeling requirements for all covers for swimming pools, spas, and hot tubs” (2).

**Standard 6.3.1.6 Pool Drain Covers**

All covers for the main drain and other suction ports of swimming and wading pools should be listed by a nationally recognized testing laboratory in accordance with ASME/ANSI standard “A112.19.8: Standard for Suction Fittings for Use in Swimming Pools, Wading Pools, Spas and Hot Tubs,” and should be used under conditions that do not exceed the approved maximum flow rate, be securely anchored using manufacturer-supplied parts installed per manufacturer’s specifications, be in good repair, and be replaced at intervals specified by manufacturer. Facilities with one outlet per pump, or multiple outlets per pump with less than thirty-six inches center-to-center distance for two outlets, must be equipped with a Safety Vacuum Release System (SVRS) meeting the ASME/ANSI standard “A112.19.17: Manufactured Safety Vacuum Release Systems for Residential and Commercial Swimming Pool, Spas, Hot Tub and Wading Pool Suction Systems” or ASTM International (ASTM) standard “F2387-04: Standard Specification for Manufactured SVRS for Swimming Pools, Spas, and Hot Tubs” standards, as required by the Virginia Graeme Baker Pool and Spa Safety Act, Section 1404(c)(1)(A)(I) (1,2).

**Standard 6.3.2.1 Lifesaving Equipment**

Each swimming pool more than six feet in width, length, or diameter should be provided with a ring buoy and rope, a rescue tube, or a throwing line and a shepherd’s hook that will not conduct electricity. This equipment should be long enough to reach the center of the pool from the edge of the pool, should be kept in good repair, and should be stored safely and conveniently for immediate access. Caregivers/teachers should be trained on the proper use of this equipment so that in emergencies, caregivers/teachers will use equipment appropriately. Children should be familiarized with the use of the equipment based on their developmental level.

**Standard 6.3.5.1 Hot Tubs, Spas, and Saunas**

Children should not be permitted in hot tubs, spas, or saunas in child care. Areas should be secured to prevent any access by children.
**Standard 6.3.5.2 Water in Containers**

Bathtubs, buckets, diaper pails, and other open containers of water should be emptied immediately after use.

**Standard 6.4.1.2 Inaccessibility of Toys or Objects to Children Under Three Years of Age**

Small objects, toys, and toy parts available to children under the age of three years should meet the federal small parts standards for toys. The following toys or objects should not be accessible to children under three years of age:

a. Toys or objects with removable parts with a diameter less than one and one-quarter inches and a length between one inch and two and one-quarter inches;

b. Balls and toys with spherical, ovoid (egg shaped), or elliptical parts that are smaller than one and three-quarters inches in diameter;

c. Toys with sharp points and edges;

d. Plastic bags;

e. Styrofoam objects;

f. Coins;

g. Rubber or latex balloons;

h. Safety pins;

i. Marbles;

j. Magnets;

k. Foam blocks, books, or objects;

l. Other small objects;

m. Latex gloves;

n. Bulletin board tacks;

o. Glitter.

**Standard 6.4.1.5 Balloons**

Infants, toddlers, and preschool children should not be permitted to inflate balloons, suck on or put balloons in their mouths nor have access to uninflated or underinflated balloons. Children under eight should not have access to latex balloons or inflated latex objects that are treated as balloons and these objects should not be permitted in the child care facility.

**Standard 6.4.2.2 Helmets**

All children one year of age and over should wear properly fitted and approved helmets while riding toys with wheels (tricycles, bicycles, etc.) or using any wheeled equipment (rollerblades, skateboards, etc.). Helmets should be removed as soon as children stop riding the wheeled toys or using wheeled equipment. Approved helmets should meet the standards of the U.S. Consumer Product Safety Commission (CPSC) (5). The standards sticker should be located on the bike helmet. Bike helmets should be
replaced if they have been involved in a crash, the helmet is cracked, when straps are broken, the helmet can no longer be worn properly, or according to recommendations by the manufacturer (usually after three years).

**Standard 6.5.1.1 Competence and Training of Transportation Staff**

At least one adult who accompanies or drives children for field trips and out-of-facility activities should receive training by a professional knowledgeable about child development and procedures, to ensure the safety of all children. The caregiver should hold a valid pediatric first aid certificate, including rescue breathing and management of blocked airways, as specified in First Aid and CPR Standards 1.4.3.1-1.4.3.3. Any emergency medications that a child might require, such as self-injecting epinephrine for life-threatening allergy, should also be available at all times as well as a mobile phone to call for medical assistance. Child:staff ratios should be maintained on field trips and during transport, as specified in Standards 1.1.1.1-1.1.1.5; the driver should not be included in these ratios. No child should ever be left alone in the vehicle.

All drivers, passenger monitors, chaperones, and assistants should receive instructions in safety precautions. Transportation procedures should include:

a. Use of developmentally appropriate safety restraints;
b. Proper placement of the child in the motor vehicle in accordance with state and federal child restraint laws and regulations and recognized best practice;
c. Training in handling of emergency medical situations. If a child has a chronic medical condition or special health care needs that could result in an emergency (such as asthma, diabetes, or seizures), the driver or chaperone should have written instructions including parent/guardian emergency contacts, child summary health information, special needs and treatment plans, and should:
d. Recognize the signs of a medical emergency;
e. Know emergency procedures to follow (3);
f. Have on hand any emergency supplies or medications necessary, properly stored out of reach of children;
g. Know specific medication administration (ex. a child who requires EpiPen or diazepam);
h. Know about water safety when field trip is to a location with a body of water.
i. Knowledge of appropriate routes to emergency facility;
j. Defensive driving;
k. Child supervision during transport, including never leaving a child unattended in or around a vehicle;
l. Issues that may arise in transporting children with behavioral issues (e.g., temper tantrums or oppositional behavior).
The receipt of such instructions should be documented in a personnel record for any paid staff or volunteer who participates in field trips or transportation activities.

Vehicles should be equipped with a first aid kit, fire extinguisher, seat belt cutter, and maps. At least one adult should have a functioning cell phone at hand. Information, names of the children and parent/guardian contact information should be carried in the vehicle along with identifying information (name, address, and telephone number) about the child care center.

**Standard 6.5.1.2 Qualifications for Drivers**

Any driver who transports children for a child care program should be at least twenty-one years of age and should have:

- a. A valid commercial driver’s license that authorizes the driver to operate the vehicle being driven;
- b. Evidence of a safe driving record for more than five years, with no crashes where a citation was issued;
- c. No alcohol, prescription or over-the-counter medications, or other drugs associated with impaired ability to drive, within twelve hours prior to transporting children. Drivers should ensure that any prescription or over-the-counter drugs taken will not impair their ability to drive;
- d. No tobacco, alcohol, or drug use while driving;
- e. No criminal record of crimes against or involving children, child neglect or abuse, substance abuse, or any crime of violence;
- f. No medical condition that would compromise driving, supervision, or evacuation capability including fatigue and sleep deprivation;
- g. Valid pediatric CPR and first aid certificate if transporting children alone.

The driver’s license number and date of expiration, vehicle insurance information, and verification of current state vehicle inspection should be on file in the facility.

The child care program should require drug testing when noncompliance with the restriction on the use of alcohol or other drugs is suspected.

**Standard 6.5.2.2 Child Passenger Safety**

When children are driven in a motor vehicle other than a bus, school bus, or a bus operated by a common carrier, the following should apply:

- a. A child should be transported only if the child is restrained in developmentally appropriate car safety seat, booster seat, seat belt, or harness that is suited to the child’s weight, age, and/or psychological development in accordance with state and federal laws and regulations and the child is securely fastened, according
to the manufacturer’s instructions, in a developmentally appropriate child restraint system.

b. Age and size-appropriate vehicle child restraint systems should be used for children under eighty pounds and under four-feet-nine-inches tall and for all children considered too small, in accordance with state and federal laws and regulations, to fit properly in a vehicle safety belt. The child passenger restraint system must meet the federal motor vehicle safety standards contained in the Code of Federal Regulations, Title 49, Section 571.213 (especially Federal Motor Vehicle Safety Standard 213), and carry notice of such compliance.

c. For children who are obese or overweight, it is important to find a car safety seat that fits the child properly. Caregivers/teachers should not use a car safety seat if the child weighs more than the seat’s weight limit or is taller than the height limit. Caregivers/teachers should check the labels on the seat or manufacturer’s instructions if they are unsure of the limits. Manufacturer’s instructions that include these specifications can also be found on the manufacturer’s Website.

d. Child passenger restraint systems should be installed and used in accordance with the manufacturer’s instructions and should be secured in back seats only.

e. All children under the age of thirteen should be transported in the back seat of a car and each child not riding in an appropriate child restraint system (i.e., a child seat, vest, or booster seat), should have an individual lap-and-shoulder seat belt (2).

f. For maximum safety, infants and toddlers should ride in a rear-facing orientation (i.e., facing the back of the car) until they are two years of age or until they have reached the upper limits for weight or height for the rear-facing seat, according to the manufacturer’s instructions (1). Once their seat is adjusted to face forward, the child passenger must ride in a forward-facing child safety seat (either a convertible seat or a combination seat) until reaching the upper height or weight limit of the seat, in accordance with the manufacturer’s instructions (10). Plans should include limiting transportation times for young infants to minimize the time that infants are sedentary in one place.

g. A booster seat should be used when, according to the manufacturer’s instructions, the child has outgrown a forward-facing child safety seat, but is still too small to safely use the vehicle seat belts (for most children this will be between four feet nine inches tall and between eight and twelve years of age) (1).

h. Car safety seats, whether provided by the child’s parents/guardians or the child care program, should be labeled with the child passenger’s name and emergency contact information.
i. Car safety seats should be replaced if they have been recalled, are past the manufacturer’s “date of use” expiration date, or have been involved in a crash that meets the U.S. Department of Transportation crash severity criteria or the manufacturer’s criteria for replacement of seats after a crash (3,11).

j. The temperature of all metal parts of vehicle child restraint systems should be checked before use to prevent burns to child passengers.

If the child care program uses a vehicle that meets the definition of a school bus and the school bus has safety restraints, the following should apply:

a. The school bus should accommodate the placement of wheelchairs with four tie-downs affixed according to the manufactures’ instructions in a forward-facing direction;

b. The wheelchair occupant should be secured by a three-point tie restraint during transport;

c. At all times, school buses should be ready to transport children who must ride in wheelchairs;

d. Manufacturers’ specifications should be followed to assure that safety requirements are met.

**Standard 6.5.2.4 Interior Temperature of Vehicles**

The interior of vehicles used to transport children should be maintained at a temperature comfortable to children. When the vehicle’s interior temperature exceeds 82°F and providing fresh air through open windows cannot reduce the temperature, the vehicle should be air-conditioned. When the interior temperature drops below 65°F and when children are feeling uncomfortably cold, the interior should be heated. To prevent hyperthermia, all vehicles should be locked when not in use, head counts of children should be taken after transporting to prevent a child from being left unintentionally in a vehicle, and children should never be intentionally left in a vehicle unattended.

**Standard 6.5.3.1 Passenger Vans**

Child care facilities that provide transportation to children, parents/guardians, staff, and others should avoid the use of fifteen-passenger vans whenever possible. Other vehicles, such as vehicles meeting the definition of a “school bus,” should be used to fulfill transportation of child passengers in particular. Conventional twelve to fifteen-passenger vans cannot be certified as school buses by the National Highway Traffic Safety Administration (NHTSA) standards (2,4), and thus cannot be sold or leased, as new vehicles, to carry students on a regular basis. Caregivers/teachers should be knowledgeable about the laws of the state(s) in which their vehicles, including passenger vans, will be registered and used.
Chapter 7: Infectious Diseases

**Standard 7.2.0.2 Unimmunized Children**

If immunizations have not been or are not to be administered because of a medical condition (contraindication), a statement from the child’s primary care provider documenting the reason why the child is temporarily or permanently medically exempt from the immunization requirements should be on file. If immunizations are not to be administered because of the parents/guardians’ religious or philosophical beliefs, a legal exemption with notarization, waiver or other state-specific required documentation signed by the parent/guardian should be on file (1, 2).

The parent/guardian of a child who has not received the age-appropriate immunizations prior to enrollment and who does not have documented medical, religious, or philosophical exemptions from routine childhood immunizations should provide documentation of a scheduled appointment or arrangement to receive immunizations. This could be a scheduled appointment with the primary care provider or an upcoming immunization clinic sponsored by a local health department or health care organization. An immunization plan and catch-up immunizations should be initiated upon enrollment and completed as soon as possible according to the “Recommended Immunization Schedules for Persons Aged 0 Through 18 Years – United States” from the Advisory Committee on Immunization Practices (ACIP), the American Academy of Pediatrics (AAP), and the American Academy of Family Physicians (AAFP). Parents/guardians of children who attend an unlicensed child care facility should be encouraged to comply with the “Recommended Immunization Schedules” (6).

If a vaccine-preventable disease to which children are susceptible occurs in the facility and potentially exposes the unimmunized children who are susceptible to that disease, the health department should be consulted to determine whether these children should be excluded for the duration of possible exposure or until the appropriate immunizations have been completed. The local or state health department will be able to provide guidelines for exclusion requirements.

**Standard 7.2.0.3 Immunization of Caregivers/Teachers**

Caregivers/teachers should be current with all immunizations routinely recommended for adults by the Advisory Committee on Immunization Practices (ACIP) of the Centers for Disease Control and Prevention (CDC) as shown in the “Recommended Adult Immunization Schedule” at http://www.cdc.gov/vaccines/recs/schedules/default.htm#adult/. This schedule is updated annually at the beginning of the calendar year and can be found in Appendix H.

Caregivers/teachers should have received the recommended vaccines in the following categories: (1,2)

National Health and Safety Performance Standards
a. Vaccines recommended for all adults who meet the age requirements and who lack evidence of immunity (i.e., lack documentation of vaccination or have no evidence of prior infection):
   1. Tdap/Td;
   2. Varicella-zoster;
   3. MMR (measles, mumps, and rubella);
   4. Seasonal influenza;
   5. Human papillomaviruses (HPV) (eleven through twenty-six years of age);
   6. Others as determined by the ACIP and state and local public health authorities.

b. Recommended if a specific risk factor is present:
   1. Pneumococcal;
   2. Hepatitis A;
   3. Hepatitis B;
   4. Meningococcal;
   5. Others as determined by the ACIP and state and local public health authorities.

c. If a staff member is not appropriately immunized for medical, religious or philosophical reasons, the child care facility should require written documentation of the reason.

d. If a vaccine-preventable disease to which adults are susceptible occurs in the facility and potentially exposes the unimmunized adults who are susceptible to that disease, the health department should be consulted to determine whether these adults should be excluded for the duration of possible exposure or until the appropriate immunizations have been completed. The local or state health department will be able to provide guidelines for exclusion requirements.

**Standard 7.3.3.1 Influenza Immunizations for Children and Caregivers/Teachers**

The parent/guardian of each child six months of age and older should provide written documentation of current annual vaccination against influenza unless there is a medical contraindication or philosophical or religious objection. Children who are too young to receive influenza vaccine before the start of influenza season should be immunized annually beginning when they reach six months of age.

Staff caring for all children should receive annual vaccination against influenza. Ideally people should be vaccinated before the start of the influenza season (as early as August or September) and immunization should continue through March or April.
**Standard 7.3.3.2 Influenza Control**

When influenza is circulating in the community, facilities should encourage parents/guardians to keep children with symptoms of acute respiratory tract illness with fever at home until their fever has subsided for at least twenty-four hours without use of fever reducing medication.

Caregivers/teachers with symptoms of acute respiratory tract illness with fever also should remain at home until their fever subsides for at least twenty-four hours.

**Standard 7.3.5.1 Recommended Control Measures for Invasive Meningococcal Infection in Child Care**

Identification of an individual with invasive meningococcal infection in the child care setting should result in the following:

4. Immediate notification of the local or state health department;
5. Notification of parents/guardians about child care contacts to the person with invasive meningococcal infection;
6. Assistance with provision of antibiotic prophylaxis and vaccine receipt, as advised by the local or state health department, to child care contacts;
7. Frequent updates and communication with parents/guardians, health care professionals, and local health authorities.

**Standard 7.4.0.1 Control of Enteric (Diarrheal) and Hepatitis A Virus (HAV) Infections**

Facilities should employ the following procedures, in addition to those stated in Child and Staff Inclusion/Exclusion/Dismissal, Standards 3.6.1.1-3.6.1.4, to prevent and control infections of the gastrointestinal tract (including diarrhea) or hepatitis A (1-3):

a. Toilet trained children who cannot use a toilet for all bowel movements while attending the facility and who develop diarrhea, as defined in Standard 3.6.1.1, should be removed from the facility by their parent/guardian. Exclude diapered children if stool is not contained in the diaper, stool frequency exceeds two or more stools above normal for that child, blood or mucus in the stool, abnormal color of stool, no urine output in eight hours, jaundice, fever with behavior change, or looks or acts ill. Pending arrival of the parent/guardian, the child should not be permitted to have contact with other children or be placed in areas used by adults who have contact with children in the facility. This should be accomplished by removing the child who is ill to a separate area of
the child care program or, if not possible, to a separate area of the child’s room. The area should be one where the child is supervised by an adult known to the child, and where the toys, equipment, and surfaces will not be used by other children or adults until after the child who is ill leaves and after the surfaces and toys have been disinfected. When moving a child to a separate area of the facility creates problems with supervision of the other children, as occurs in small family child care homes, the child who is ill should be kept as comfortable as possible, with minimal contact between children who are ill and well children, until the parent/guardian arrives. Caregivers/teachers with diarrhea as defined in Standard 3.6.1.2 should be excluded. Separation and exclusion of children or caregivers/teachers should not be deferred pending health assessment or laboratory testing to identify an enteric pathogen.

b. A child who develops jaundice (when skin and white parts of the eye are yellow) while attending child care should be separated from other children and the child’s parent/guardian should be contacted to remove the child. The child should remain separated from other children as described above until the parent/guardian arrives and removes the child from the facility.

c. Exclusion for diarrhea should continue until either the diarrhea stops or the continued loose stools are deemed not to be infectious by a licensed health care professional. Exclusion for hepatitis A virus (HAV) should continue for one week after onset of jaundice.

d. Alternate care for children with diarrhea or hepatitis A in special facilities for children who are ill should be provided in facilities that can provide separate care for children with infections of the gastrointestinal tract (including diarrhea) or hepatitis A.

e. Children and caregivers/teachers who excrete intestinal pathogens but no longer have diarrhea generally may be allowed to return to child care once the diarrhea resolves, except for the case of infections with *Shigella*, Shiga toxin-producing *E. coli* (STEC), or *Salmonella enterica* serotype Typhi. For *Shigella* and STEC, resolution of symptoms and two negative stool cultures are required for readmission, unless state requirements differ. For *Salmonella* serotype Typhi, resolution of symptoms and three negative stool cultures are required for return to child care. For *Salmonella* species other than serotype Typhi, documentation of negative stool cultures are not required from asymptomatic people for readmission to child care.

f. The local health department should be informed immediately of the occurrence of HAV infection or an increased frequency of diarrheal illness in children or staff in a child care facility.

**Recommended post-exposure prophylaxis for hepatitis A includes administration of hepatitis A vaccine or immune globulin to all**
previously unimmunized staff members and attendees of a child care facility in which a person with hepatitis A is identified.

h. If there has been an exposure to a person with hepatitis A or diarrhea in the child care facility, caregivers/teachers should inform parents/guardians, in cooperation with the health department, that their children may have been exposed to children with HAV infection or to another person with a diarrheal illness.

**Standard 7.5.10.1 Staphylococcus Aureus Skin Infections Including MRSA**

The following should be implemented when children or staff with lesions suspicious for *Staphylococcus aureus* infections are identified:

a. Lesions should be covered with a dressing;
b. Report the lesions to the parent/guardian with a recommendation for evaluation by a primary care provider;
c. Exclusion is not warranted unless the individual meets any of the following criteria:
   8. Care for other children would be compromised by care required for the person with the S. aureus infection;
   9. The individual with the S. aureus infection has fever or a change in behavior;
   10. The lesion(s) cannot be adequately covered by a bandage or the bandage needs frequent changing;
   11. A health care professional or health department official recommends exclusion of the person with S. aureus infection.

Meticulous hand hygiene following contact with lesions should be practiced. Careful hand hygiene and sanitization of surfaces and objects potentially exposed to infectious material are the best ways to prevent spread. Children and staff in close contact with an infected person should be observed for symptoms of S. aureus infection and referred for evaluation, if indicated.

A child may return to group child care when staff members are able to care for the child without compromising their ability to care for others, the child is able to participate in activities, appropriate therapy is being given, and the lesions can be covered.

*S. aureus* skin infections initially may appear as red raised areas that may become pus-filled abscesses or “boils,” surrounded by areas of redness and tenderness. Fever and other symptoms including decreased activity, bone and joint pain, and difficulty breathing may occur when the infection occurs in other body systems. If any of these signs or symptoms occur, the child should be evaluated by his/her primary care provider.
Chapter 8: Children with Special Health Care Needs and Disabilities

No standards from Chapter 8 were selected to be included in *Stepping Stones*, Third Edition. However, content specifically for children with special health care needs is included in the following standards:

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Chapter 9: Policies

Standard 9.2.3.2 Content and Development of the Plan for Care of Children and Staff Who Are Ill

All child care facilities should have written policies for the management and care of children and staff who are ill. The facility’s plan for the care of children and staff who are ill should be developed in consultation with the facility’s child care health consultant and other health care professionals to address current understanding of the technical issues of contagion and other health risks. This plan should include:

a. Policies and procedures for urgent and emergency care;
b. Admission and inclusion/exclusion policies;
c. A description of illnesses common to children in child care, their management, and precautions to address the needs and behavior of the child who is ill, as well as to protect the health of other children and staff;
d. A procedure to obtain and maintain updated individual care plans for children and staff with special health care needs;
e. A procedure for documenting the name of person affected, date and time of illness, a description of symptoms, the response of the caregiver/teacher or other staff to these symptoms, who was notified (such as a parent/guardian, primary care provider, nurse, physician, or health department), and the response;
f. Medication policy;
g. Seasonal and pandemic influenza policy;
h. Staff illness-guidelines for exclusion and re-entry.

In group care, the facility should address the well-being of all those affected by illness: the child, the staff, parents/guardians of the child, other children in the facility and their parents/guardians, and the community. The priority of the policy should be to meet the needs of the child who is ill and the other children in the facility. The policy should address the circumstances under which separation of the affected individual (child or staff person) from the group is required; the circumstances under which the staff, parents/guardians, or other designated persons need to be informed; and the procedures to be followed in these cases. The policy should take into consideration:

a. The physical facility;
b. The number and the qualifications of the facility’s personnel;
c. The fact that children do become ill frequently and at unpredictable times;
d. The fact that adults may be on staff with known health problems or may develop health problems while at work;
The fact that working parents/guardians often are not given leave for their children’s illnesses;

The amount of care the child who is ill requires if the child remains in the program, can staff devote the time for caring of a child who is ill in the classroom without leaving other children unattended, and can the child participate in any of the classroom activities (1).

**Standard 9.2.3.12 Infant Feeding Policy**

A policy about infant feeding should be developed with the input and approval from the nutritionist/registered dietitian and should include the following:

- **a.** Storage and handling of expressed human milk;
- **b.** Determination of the kind and amount of commercially prepared formula to be prepared for infants as appropriate;
- **c.** Preparation, storage, and handling of infant formula;
- **d.** Proper handwashing of the caregiver/teacher and the children;
- **e.** Use and proper sanitizing of feeding chairs and of mechanical food preparation and feeding devices, including blenders, feeding bottles, and food warmers;
- **f.** Whether expressed human milk, formula, or infant food should be provided from home, and if so, how much food preparation and use of feeding devices, including blenders, feeding bottles, and food warmers, should be the responsibility of the caregiver/teacher;
- **g.** Holding infants during bottle-feeding or feeding them sitting up;
- **h.** Prohibiting bottle propping during feeding or prolonging feeding;
- **i.** Responding to infants’ need for food in a flexible fashion to allow cue feedings in a manner that is consistent with the developmental abilities of the child (policy acknowledges that feeding infants on cue rather than on a schedule may help prevent obesity) (1,2);
- **j.** Introduction and feeding of age-appropriate solid foods (complementary foods);
- **k.** Specification of the number of children who can be fed by one adult at one time;
- **l.** Handling of food intolerance or allergies (e.g., cow’s milk, peanuts, orange juice, eggs, wheat).

Individual written infant feeding plans regarding feeding needs and feeding schedule should be developed for each infant in consultation with the infant’s primary care provider and parents/guardians.

**Standard 9.2.4.1 Written Plan and Training for Handling Urgent Medical Care or Threatening Incidents**

The facility should have a written plan for reporting and managing what they assess to be an incident or unusual occurrence that is threatening to the
health, safety, or welfare of the children, staff, or volunteers. The facility should also include procedures of staff training on this plan.

The management, documentation, and reporting of the following types of incidents, at a minimum, that occur at the child care facility should be addressed in the plan:

a. Lost or missing child;

b. Suspected maltreatment of a child (also see state’s mandates for reporting);

c. Suspected sexual, physical, or emotional abuse of staff, volunteers, or family members occurring while they are on the premises of the child care facility;

d. Injuries to children requiring medical or dental care;

e. Illness or injuries requiring hospitalization or emergency treatment;

f. Mental health emergencies;

g. Health and safety emergencies involving parents/guardians and visitors to the program;

h. Death of a child or staff member, including a death that was the result of serious illness or injury that occurred on the premises of the child care facility, even if the death occurred outside of child care hours;

i. The presence of a threatening individual who attempts or succeeds in gaining entrance to the facility.

The following procedures, at a minimum, should be addressed in the plan for urgent care:

a. Provision for a caregiver/teacher to accompany a child to a source of urgent care and remain with the child until the parent/guardian assumes responsibility for the child;

b. Provision for the caregiver/teacher to provide the medical care personnel with an authorization form signed by the parent/guardian for emergency medical care and a written informed consent form signed by the parent/guardian allowing the facility to share the child’s health records with other service providers;

c. Provision for a backup caregiver/teacher or substitute for large and small family child care homes to make the arrangement for urgent care feasible (child:staff ratios must be maintained at the facility during the emergency);

d. Notification of parent/guardian(s);

e. Pre-planning for the source of urgent medical and dental care (such as a hospital emergency room, medical or dental clinic, or other constantly staffed facility known to caregivers/teachers and acceptable to parents/guardians);

f. Completion of a written incident/injury report and the program’s response;

National Health and Safety Performance Standards
g. Assurance that the first aid kits are resupplied following each first aid incident, and that required contents are maintained in a serviceable condition, by a monthly review of the contents;

h. Policy for scheduled reviews of staff members’ ability to perform first aid for averting the need for emergency medical services;

i. Policy for staff supervision following an incident when a child is lost, missing, or seriously injured.

**Standard 9.2.4.3 Disaster Planning, Training, and Communication**

Facilities should consider how to prepare for and respond to emergency or natural disaster situations and develop written plans accordingly. All programs should have procedures in place to address natural disasters that are relevant to their location (such as earthquakes, tornados, tsunamis or flash floods, storms, and volcanoes) and all hazards/disasters that could occur in any location including acts of violence, bioterrorism/terrorism, exposure to hazardous agents, facility damage, fire, missing child, power outage, and other situations that may require evacuation, lock-down, or shelter-in-place.

**Written Emergency/Disaster Plan:**

Facilities should develop and implement a written plan that describes the practices and procedures they use to prepare for and respond to emergency or disaster situations. This Emergency/Disaster Plan should include:

a. Information on disasters likely to occur in or near the facility, county, state, or region that require advance preparation and/or contingency planning;

b. Plans (and a schedule) to conduct regularly scheduled practice drills within the facility and in collaboration with community or other exercises;

c. Mechanisms for notifying and communicating with parents/guardians in various situations (e.g., Website postings; email notification; central telephone number, answering machine, or answering service messaging; telephone calls, use of telephone tree, or cellular phone texts; and/or posting of flyers at the facility and other community locations);

d. Mechanisms for notifying and communicating with emergency management public officials;

e. Information on crisis management (decision-making and practices) related to sheltering in place, relocating to another facility, evacuation procedures including how non-mobile children and adults will be evacuated, safe transportation of children including children with special health care needs, transporting necessary
medical equipment obtaining emergency medical care, responding to an intruder, etc.;
f. Identification of primary and secondary meeting places and plans for reunification of parents/guardians with their children;
g. Details on collaborative planning with other groups and representatives (such as emergency management agencies, other child care facilities, schools, emergency personnel and first responders, pediatricians/health professionals, public health agencies, clinics, hospitals, and volunteer agencies including Red Cross and other known groups likely to provide shelter and related services);
h. Continuity of operations planning, including backing up or retrieving health and other key records/files and managing financial issues such as paying employees and bills during the aftermath of the disaster;
i. Contingency plans for various situations that address:
   1. Emergency contact information and procedures;
   2. How the facility will care for children and account for them, until the parent/guardian has accepted responsibility for their care;
   3. Acquiring, stockpiling, storing, and cycling to keep updated emergency food/water and supplies that might be needed to care for children and staff for up to one week if shelter-in-place is required and when removal to an alternate location is required;
   4. Administering medicine and implementing other instructions as described in individual special care plans;
   5. Procedures that might be implemented in the event of an outbreak, epidemic, or other infectious disease emergency (e.g., reviewing relevant immunization records, keeping symptom records, implementing tracking procedures and corrective actions, modifying exclusion and isolation guidelines, coordinating with schools, reporting or responding to notices about public health emergencies);
   6. Procedures for staff to follow in the event that they are on a field trip or are in the midst of transporting children when an emergency or disaster situation arises;
   7. Staff responsibilities and assignment of tasks (facilities should recognize that staff can and should be utilized to assist in facility preparedness and response efforts, however, they should not be hindered in addressing their own personal or family preparedness efforts, including evacuation).
Details in the Emergency/Disaster Plan should be reviewed and updated bi-annually and immediately after any relevant event to incorporate any best practices or lessons learned into the document.

Facilities should identify in advance which agency or agencies would be the primary contact for them regarding child care regulations, evacuation instructions, and other directives that might be communicated in various emergency or disaster situations.

Training:

Staff should receive training on emergency/disaster planning and response. Training should be provided by emergency management agencies, educators, child care health consultants, health professionals, or emergency personnel qualified and experienced in disaster preparedness and response. The training should address:

- Why it is important for child care facilities to prepare for disasters and to have an Emergency/Disaster Plan;
- Different types of emergency and disaster situations and when and how they may occur:
  - Natural Disasters;
  - Terrorism (i.e., biological, chemical, radiological, nuclear);
  - Outbreaks, epidemics, or other infectious disease emergencies;
- The special and unique needs of children, appropriate response to children’s physical and emotional needs during and after the disaster, including information on consulting with pediatric disaster experts;
- Providing first aid, medications, and accessing emergency health care in situations where there are not enough available resources;
- Contingency planning including the ability to be flexible, to improvise, and to adapt to ever-changing situations;
- Developing personal and family preparedness plans;
- Supporting and communicating with families;
- Floor plan safety and layout;
- Location of emergency documents, supplies, medications, and equipment needed by children and staff with special health care needs;
- Typical community, county, and state emergency procedures (including information on state disaster and pandemic influenza plans, emergency operation centers, and incident command structure);
- Community resources for post-event support such as mental health consultants, safety consultants;
l. Which individuals or agency representatives have the authority to close child care programs and schools and when and why this might occur;

m. Insurance and liability issues;

n. New advances in technology, communication efforts, and disaster preparedness strategies customized to meet children’s needs.

Communicating with Parents/Guardians:

Facilities should share detailed information about facility disaster planning and preparedness with parents/guardians when they enroll their children in the program, including:

a. Portions of the Emergency/Disaster Plan relevant to parents/guardians or the public;

b. Procedures and instructions for what parents/guardians can expect if something happens at the facility;

c. Description of how parents/guardians will receive information and updates during or after a potential emergency or disaster situation;

d. Situations that might require parents/guardians to have a contingency plan regarding how their children will be cared for in the unlikely event of a facility closure.

Facilities should conduct an annual drill, test, or “practice use” of the communication options/mechanisms that are selected.

**Standard 9.2.4.5 Emergency and Evacuation Drills/Exercises Policy**

The facility should have a policy documenting that emergency drills/exercises should be regularly practiced for geographically appropriate natural disasters and human generated events such as:

a. Fire, monthly;

b. Tornadoes, on a monthly basis in tornado season;

c. Floods, before the flood season;

d. Earthquakes, every six months;

e. Hurricanes, annually;

f. Threatening person outside or inside the facility;

g. Rabid animal;

h. Toxic chemical spill;

i. Nuclear event.

All drills/exercises should be recorded. Please see Standard 9.4.1.16: Evacuation and Shelter-in-Place Drill Record for more information.

A fire evacuation procedure should be approved and certified in writing by a fire inspector for centers, and by a local fire department representative for large and small family child care homes, during an annual on-site visit when an evacuation drill is observed and the facility is inspected for fire safety hazards.

National Health and Safety Performance Standards
Depending on the type of disaster, the emergency drill may be within the existing facility such as in the case of earthquakes or tornadoes where the drill might be moving to a certain location within the building (basements, away from windows, etc.) Evacuation drills/exercises should be practiced at various times of the day, including nap time, during varied activities and from all exits. Children should be accounted for during the practice.

The facility should time evacuation procedures. They should aim to evacuate all persons in the specific number of minutes recommended by the local fire department for the fire evacuation, or recommended by emergency response personnel.

Cribs designed to be used as evacuation cribs, can be used to evacuate infants, if rolling is possible on the evacuation route(s).

**Standard 9.2.4.7 Sign-In/Sign-Out System**

The facility should have a sign-in/sign-out system to track who enters and exits the facility. The system should include name, contact number, relationship to facility (e.g., parent/guardian, vendor, guest, etc.) and recorded time in and out.

**TYPE OF FACILITY:** Center, Large Family Child Care Home

**Standard 9.2.4.8 Authorized Persons to Pick Up Child**

Names, addresses, and telephone numbers of persons authorized to take a child under care out of the facility should be maintained during the enrollment process along with clarification/documentation of any custody issues/court orders. The legal guardian(s) of the child should be established and documented at this time.

If there is an extenuating circumstance (e.g., the parent/guardian or other authorized person is not able to pick up the child), another individual may pick up a child from child care if they are authorized to do so by the parent/guardian in authenticated communication such as a witnessed phone conversation in which the caller provides pre-specified identifying information or writing with pre-specified identifying information. The telephone authorization should be confirmed by a return call to the parents/guardians. The facility should establish a mechanism for identifying a person for whom the parents/guardians have given the facility prior written authorization to pick up their child, such as requiring photo ID or including a photo of each authorized person in the child’s file.

If a previously unauthorized individual drops off the child, he or she will not be authorized to pick up the child without first being added to the authorization record. Policies should address how the facility will handle the situation if a parent/guardian arrives who is intoxicated or otherwise incapable of bringing the child home safely, or if a non-custodial parent attempts to claim the child without the consent of the custodial parent.
Should an unauthorized individual arrive without the facility receiving prior communication with the parent/guardian, the parent/guardian should be contacted immediately, preferably privately. If the information provided by the parent/guardian does not match the information and identification of the unauthorized individual, the child will not be permitted to leave the child care facility. If it is determined that the parent/guardian is unaware of the individual’s attempt to pick-up the child, or if the parent/guardian has not or will not authorize the individual to take the child from the child care facility, information regarding the individual should be documented and the individual should be asked to leave. If the individual does not leave and his or her behavior is concerning to the child care staff or if the child is abducted by force, then the police should be contacted immediately with a detailed description of the individual and any other obtainable information such as a license plate number.

**Standard 9.4.1.10 Documentation of Parent/Guardian Notification of Injury, Illness, or Death in Program**

The facility should document that a child’s parent/guardian was notified immediately in the event of a death of their child, of an injury or illness of their child that required professional medical attention, or if their child was lost/missing.

Documentation should also occur noting when law enforcement was notified (immediately) in the event of a death of a child or a lost/missing child.

The facility should document in accordance with state regulations, its response to any of the following events:

a. Death;  
b. Serious injury or illness that required medical attention;  
c. Reportable infectious disease;  
d. Any other significant event relating to the health and safety of a child (such as a lost child, a fire or other structural damage, work stoppage, or closure of the facility).

The caregiver/teacher should call 9-1-1 to insure immediate emergency medical support for a death or serious injury or illness. They should follow state regulations with regard to when they should notify state agencies such as the licensing agency and the local or state health department about any of the above events.

**Standard 9.4.1.12 Record of Valid License, Certificate, or Registration of Facility**

Every facility should hold a valid license or certificate, or documentation of, registration prior to operation as required by the local and/or state statute.

National Health and Safety Performance Standards
Standard 9.4.2.6 Contents of Medication Record

The file for each child should include a medication record maintained on an ongoing basis by designated staff for all prescription and non-prescription (over-the-counter [OTC]) medications. State requirements should be checked and followed. The medication record for prescription and non-prescription medications should include the following:

a. A separate consent signed by the parent/guardian for each medication the caregiver/teacher has permission to administer to the child; each consent should include the child’s name, medication, time, dose, how to give the medication, and start and end dates when it should be given;

b. Authorization from the prescribing health professional for each prescription and non-prescription medication; this authorization should also include potential side effects and other warnings about the medication (exception: non-prescription sunscreen and insect repellent always require parental/guardian consent but do not require instructions from each child’s individual medical provider);

c. Administration log which includes the child’s name, the medication that was given, the dose, the route of administration, the time and date, and the signature or initials of the person administering the medication. For medications given “as needed,” record the reason the medication was given. Space should be available for notations of any side-effects noted after the medication was given or if the dose was not retained because of the child vomiting or spitting out the medication. Documentation should also be made of attempts to give medications that were refused by the child;

d. Information about prescription medication brought to the facility by the parents/guardians in the original, labeled container with a label that includes the child’s name, date filled, prescribing clinician’s name, pharmacy name and phone number, dosage/instructions, and relevant warnings. Potential side effects and other warnings about the medication should be listed on the authorization form;

e. Non prescription medications should be brought to the facility in the original container, labeled with the child’s complete name and administered according to the authorization completed by the person with prescriptive authority;

f. For medications that are to be given or available to be given for the entire year, a Care Plan should also be in place (for instance, inhalers for asthma or epinephrine for possible allergy);

g. Side effects.
Chapter 10: Licensing and Community Action

Standard 10.4.2.1 Frequency of Inspections for Child Care Centers, Large Family Child Care Homes, and Small Family Child Care Homes

The licensing inspector should make an onsite inspection to measure compliance with licensing rules prior to issuing an initial license and at least two inspections each year to each center and large and small family child care home thereafter. At least one of the inspections should be unannounced and more if needed for the facility to achieve satisfactory compliance or is closed at any time (1). Sufficient numbers of licensing inspectors should be hired to provide adequate time visiting and inspecting facilities to insure compliance with regulations.

The number of inspections should not include those inspections conducted for the purpose of investigating complaints. Complaints should be investigated promptly, based on severity of the complaint. States are encouraged to post the results of licensing inspections, including complaints, on the Internet for parent and public review. Parents/guardians should be provided easy access to the licensing rules and made aware of how to report complaints to the licensing agency.
Gloving

Wash hands prior to using gloves if hands are visibly soiled.

Put on a clean pair of gloves.

Provide the appropriate care.

Remove each glove carefully. Grab the first glove at the palm and strip the glove off. Touch dirty surfaces only to dirty surfaces.

Ball-up the dirty glove in the palm of the other gloved hand.

With the clean hand strip the glove off from underneath at the wrist, turning the glove inside out. Touch dirty surfaces only to dirty surfaces.

Discard the dirty gloves immediately in a step can. Wash your hands.

Note that sensitivity to latex is a growing problem. If caregivers/teachers or children who are sensitive to latex are present in the facility, non-latex gloves should be used.

# Recommended Adult Immunization Schedule

**UNITED STATES - 2011**

*Note: These recommendations must be read in the context of the footnotes that follow containing number of doses, intervals between doses, and other important information.*

## Figure 1. Recommended adult immunization schedule, by vaccine and age group

<table>
<thead>
<tr>
<th>VACCINE</th>
<th>AGE GROUP</th>
<th>19–26 years</th>
<th>27–49 years</th>
<th>50–59 years</th>
<th>60–64 years</th>
<th>≥65 years</th>
</tr>
</thead>
<tbody>
<tr>
<td>influenza1,**</td>
<td></td>
<td>1 dose annually</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>tetanus, diphtheria, pertussis (Td/Tdap)**</td>
<td>Substitute 1-time dose of Tdap for Td booster; then boost with Td every 10 yrs</td>
<td>Td booster every 10 yrs</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>varicella8,**</td>
<td></td>
<td>2 doses</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>human papillomavirus (HPV)4,**</td>
<td></td>
<td>3 doses (females)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>zoster5</td>
<td></td>
<td>1 dose</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>mumps, measles, rubella (MMR)8,**</td>
<td></td>
<td>1 or 2 doses</td>
<td></td>
<td>1 dose</td>
<td></td>
<td></td>
</tr>
<tr>
<td>pneumococcal (polysaccharide)7,8</td>
<td></td>
<td>1 or 2 doses</td>
<td></td>
<td>1 dose</td>
<td></td>
<td></td>
</tr>
<tr>
<td>meningococcal9,**</td>
<td></td>
<td>1 or more doses</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>hepatitis A10,**</td>
<td></td>
<td>2 doses</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>hepatitis B11,**</td>
<td></td>
<td>3 doses</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Covered by the Vaccine Injury Compensation Program.*

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For persons in this category who meet the age requirements and who have evidence of immunity (e.g., lack documentation of vaccination or have no evidence of previous infection)

Recommended if some other risk factor is present (e.g., based on medical, occupational, lifestyle, or other indications)

No recommendation

---

Report all clinically significant postvaccination reactions to the Vaccine Adverse Event Reporting System (VAERS). Reporting forms and instructions on filing a VAERS report are available at [http://www.vaers.hhs.gov](http://www.vaers.hhs.gov) or by telephone, 800-822-7967.

Information on how to file a Vaccine Injury Compensation Program claim is available at [http://www.hrsa.gov/vaccineinjurycompensation](http://www.hrsa.gov/vaccineinjurycompensation) or by telephone, 800-338-2382. Information about filing a claim for vaccine injury is available through the U.S. Court of Federal Claims, 717 Madison Place, N.W., Washington, D.C. 20005; telephone, 202-357-6400.

Additional information about the vaccines in this schedule, extent of available data, and contraindications for vaccination also is available at [http://www.cdc.gov/vaccines](http://www.cdc.gov/vaccines) or from the CDC-INFO Contact Center at 800-CDC-INFO (800-232-4636) in English and Spanish, 24 hours a day, 7 days a week.
## Figure 2. Vaccines that might be indicated for adults based on medical and other indications

<table>
<thead>
<tr>
<th>INDICATION</th>
<th>VACCINE</th>
<th>Dose</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pregnancy</td>
<td>Immune-compromising conditions (excluding human immunodeficiency virus (HIV))</td>
<td>1 dose annually</td>
<td>TIV or LAIV annually</td>
</tr>
<tr>
<td>CD4+ T lymphopenia (CD4+ &lt;200 cells/μL)</td>
<td>HIV infection</td>
<td>1 dose annually</td>
<td>TIV or LAIV annually</td>
</tr>
<tr>
<td>CD4+ + T lymphopenia (CD4+ &lt;200 cells/μL)</td>
<td>Diabetes, heart disease, chronic lung disease, chronic liver disease, or latent HIV infection</td>
<td>1 dose annually</td>
<td>TIV or LAIV annually</td>
</tr>
<tr>
<td>Elevated creatinine or persistent complement component deficiencies</td>
<td>Kidney failure, end-stage renal disease, receipt of hemodialysis</td>
<td>1 dose annually</td>
<td>TIV or LAIV annually</td>
</tr>
<tr>
<td>Healthcare personnel</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Influenza1, *</td>
<td>Td</td>
<td>1 dose TIV annually</td>
<td></td>
</tr>
<tr>
<td>Tetanus, diphtheria, pertussis (Td/Tdap)2, *</td>
<td>Td</td>
<td>Substitute 1-time dose of Tdap for Td booster; then boost with Td every 10 yrs</td>
<td></td>
</tr>
<tr>
<td>Varicella3, *</td>
<td>Contraindicated</td>
<td>2 doses</td>
<td></td>
</tr>
<tr>
<td>Human papillomavirus (HPV)4, *</td>
<td></td>
<td>3 doses through age 26 yrs</td>
<td></td>
</tr>
<tr>
<td>Zoster5</td>
<td>Contraindicated</td>
<td>1 dose</td>
<td></td>
</tr>
<tr>
<td>Measles, mumps, rubella (MMR)6, *</td>
<td>Contraindicated</td>
<td>1 or 2 doses</td>
<td></td>
</tr>
<tr>
<td>Pneumococcal (polysaccharide)7, 8</td>
<td></td>
<td>1 or 2 doses</td>
<td></td>
</tr>
<tr>
<td>Meningococcal9, *</td>
<td></td>
<td>1 or more doses</td>
<td></td>
</tr>
<tr>
<td>Hepatitis A10, *</td>
<td></td>
<td>2 doses</td>
<td></td>
</tr>
<tr>
<td>Hepatitis B11, *</td>
<td></td>
<td>3 doses</td>
<td></td>
</tr>
</tbody>
</table>

*Covered by the Vaccine Injury Compensation Program.

For all persons in this category who meet the age requirements and who lack evidence of immunity (e.g., lack documentation of vaccination or have no evidence of previous infection)...

Recommended if some other risk factor is present (e.g., on the basis of medical, occupational, travel, or other indications)...

No recommendation...

These schedules provide the recommended age groups and medical indications for which administration of currently licensed and recommended vaccines is indicated for persons 19 years of age and older, as of February 4, 2011. For all vaccines being recommended on the adult immunization schedule, a vaccine series does not need to be restarted, regardless of the time that has elapsed between doses. Licensed combination vaccines may be used whenever any components of the combinations are indicated and when the vaccine's other components are not contraindicated. For detailed recommendations on all vaccines, including those used primarily for travelers or that are intended for use in the U.S., consult the manufacturers' package inserts and the complete statements from the Advisory Committee on Immunization Practices (http://www.cdc.gov/vaccines/acip/index.htm).

*The recommendations in this schedule were approved by the Centers for Disease Control and Prevention's (CDC) Advisory Committee on Immunization Practices (ACIP), the American Academy of Family Physicians (AAFP), the American College of Obstetricians and Gynecologists (ACOG), and the American Academy of Pediatrics (AAP).
Footnotes

Recommended Adult Immunization Schedule—UNITED STATES · 2011

For complete statements by the Advisory Committee on Immunization Practices (ACIP), visit www.cdc.gov/vaccines/pubs/ACIP-list.htm.

1. Influenza vaccination
Annual vaccination against influenza is recommended for all persons aged 6 months and older, including all adults. Healthy, nonpregnant adults aged less than 50 years with high-risk medical conditions can receive either intramuscularly administered live, attenuated influenza vaccine (FluMist), or inactivated vaccine. Other persons should receive the inactivated vaccine. Adults aged 65 years and older can receive the standard influenza vaccine or the high-dose (Fluzone) influenza vaccine. Additional information about influenza vaccination is available at www.cdc.gov/vaccines/pubs/vpd-vacc-flu/default.htm.

2. Tetanus, diphtheria, and acellular pertussis (Td/Tdap) vaccination
Administer a one-time dose of Tdap to adults aged 16 years or older who have not received Tdap previously or for whom vaccine status is unknown to replace one of the 10-year Td boosters, and as soon as feasible to all 1) postpartum women, 2) close contacts of infants younger than age 12 months (e.g., grandparents and child-care providers), and 3) healthcare personnel with direct patient contact. Adults aged 65 years and older who have not previously received Tdap and who have close contact with an infant aged less than 12 months also should be vaccinated. Other adults aged 65 years and older may receive Tdap. Tdap can be administered regardless of interval since the most recent tetanus or diphtheria-containing vaccine.

3. Varicella vaccination
All adults without evidence of immunity to varicella should receive 2 doses of single-antigen varicella vaccine if not previously vaccinated or a second dose if they have received only 1 dose, unless they have a medical contraindication. Special consideration should be given to those who 1) have close contact with persons at high risk for severe disease (e.g., healthcare personnel and family contacts of persons with immunocompromising conditions) or 2) are at high risk for exposure or transmission (e.g., teachers, child-care employees, residents and staff members of institutional settings, including correctional institutions; college students; military personnel; and adults living in households with children, nonpregnant women of childbearing age, and international travelers).

Evidence of immunity to varicella in adults includes any of the following: 1) documentation of 2 doses of varicella vaccine at least 4 weeks apart; 2) U.S.-born before 1980 (although for healthcare personnel and pregnant women, birth before 1980 should not be considered evidence of immunity); 3) history of varicella based on diagnosis or confirmation of varicella by a healthcare provider (for a patient reporting a history of or having an atypical case, a mild case, or both, healthcare providers should obtain either an epidemiologic link with a typical varicella case or to a laboratory-confirmed case or evidence of laboratory confirmation, if it was performed at the time of acute disease); 4) history of herpes zoster based on diagnosis or confirmation of herpes zoster by a healthcare provider; or 5) laboratory evidence of immunity or laboratory confirmation of disease.

Pregnant women should be assessed for evidence of varicella immunity. Women who do not have evidence of immunity should receive the first dose of varicella vaccine upon completion or termination of pregnancy and before discharge from the healthcare facility. The second dose should be administered 4-8 weeks after the first dose.

4. Human papillomavirus (HPV) vaccination
HPV vaccination with either quadrivalent (HPV4) vaccine or bivalent vaccine (HPV2) is recommended for females at age 11 or 12 years and catch-up vaccination for females aged 13 through 26 years. Ideally, vaccine should be administered before potential exposure to HPV through sexual activity; however, females who are sexually active should still be vaccinated consistent with age-based recommendations. Sexually active females who have not been infected with any of the four HPV vaccine types (types 6, 11, 16, and 18, all of which HPV4 prevents) or any of the two HPV vaccine types (types 16 and 18, both of which HPV2 prevents) receive the full benefit of the vaccination. Vaccination is less beneficial for females who have already been infected with one or more of the HPV vaccine types. HPV4 or HPV2 can be administered to persons with a history of genital warts, abnormal Pap test, or positive HPV DNA test, because these conditions are not evidence of previous infection with all vaccine HPV types.

HPV4 may be administered to males aged 9 through 26 years to reduce their likelihood of genital warts. HPV4 would be most effective when administered before exposure to HPV through sexual contact. A complete series for either HPV4 or HPV2 consists of 3 doses. The second dose should be administered 1-2 months after the first dose; the third dose should be administered 6 months after the first dose.

Although HPV vaccination is not specifically recommended for persons with the medical indications described in Figure 2, Vaccines that might be indicated for adults based on medical and other indications. It may be administered to these persons because the HPV vaccine is not a live-virus vaccine. However, the immune responses and vaccine efficacy might be less for persons with the medical indications described in Figure 2 than in persons who do not have the medical indications described or who are immunocompetent.
5. Herpes zoster vaccination
A single dose of zoster vaccine is recommended for adults aged 60 years and older regardless of whether they report a previous episode of herpes zoster. Persons with chronic medical conditions may be vaccinated unless their condition constitutes a contraindication.

6. Measles, mumps, rubella (MMR) vaccination
Adults born before 1957 generally are considered immune to measles and mumps. All adults born in 1957 or later should have documentation of 1 or more doses of MMR vaccine unless they have a medical contraindication to the vaccine, laboratory evidence of immunity to each of the three diseases, or documentation of provider-diagnosed measles or mumps disease. For rubella, documentation of provider-diagnosed disease is not considered acceptable evidence of immunity.

Measles component: A second dose of MMR vaccine, administered a minimum of 28 days after the first dose, is recommended for adults who 1) have been recently exposed to measles or are in an outbreak setting; 2) are students in postsecondary educational institutions; 3) work in a healthcare facility; or 4) plan to travel internationally. Persons who received measles vaccine during 1968–1978 should be revaccinated with 2 doses of MMR vaccine.

Mumps component: A second dose of MMR vaccine, administered a minimum of 28 days after the first dose, is recommended for adults who 1) live in a community experiencing a mumps outbreak and are in an affected age group; 2) are students in postsecondary educational institutions; or 3) work in a healthcare facility or plan to travel internationally. Persons vaccinated before 1979 with either killed mumps vaccine or mumps vaccine of unknown type who are at high risk for mumps infection (e.g., persons who are working in a healthcare facility) should be revaccinated with 2 doses of MMR vaccine.

Rubella component: For women of childbearing age, regardless of birth year, rubella immunity should be determined. If there is no evidence of immunity, women who are not pregnant should be vaccinated. Pregnant women who do not have evidence of immunity should receive MMR vaccine upon completion or termination of pregnancy and before discharge from the healthcare facility.

Healthcare personnel born before 1957: For unvaccinated healthcare personnel born before 1957 who lack laboratory evidence of measles, mumps, and/or rubella immunity or laboratory confirmation of disease, healthcare facilities should 1) consider routinely vaccinating personnel with 2 doses of MMR vaccine at the appropriate interval (for measles and mumps) and 1 dose of MMR vaccine for rubella, and 2) recommend 2 doses of MMR vaccine at the appropriate interval during an outbreak of measles or mumps, and 1 dose during an outbreak of rubella. Complete information about evidence of immunity is available at http://www.cdc.gov/vaccines/recs/provisional/default.htm.

7. Pneumococcal polysaccharide (PPSV) vaccination
Vaccinate all persons with the following indications:
- Medical: Chronic lung disease (including asthma); chronic cardiovascular disease; diabetes mellitus; chronic liver disease; cirrhosis; chronic alcoholism; functional or anatomic asplenia (e.g., sickle cell disease or splenectomy); [if elective splenectomy is planned, vaccinate at least 2 weeks before surgery]; immunocompromising conditions (including chronic renal failure or nephrotic syndrome); and cochlear implants and cerebrospinal fluid leaks. Vaccinate as close as possible.
- Other: Residents of nursing homes or long-term care facilities and persons who smoke cigarettes. Routine use of PPSV is not recommended for American Indians/Alaska Natives or persons aged less than 65 years unless they have underlying medical conditions that are PPSV indications. However, public health authorities may consider recommending PPSV for American Indians/Alaska Natives and persons aged 50 through 64 years who are living in areas where the risk for invasive pneumococcal disease is increased.

8. Revaccination with PPSV
One-time revaccination after 5 years is recommended for persons aged 19 through 64 years with chronic renal failure or nephrotic syndrome; functional or anatomic asplenia (e.g., sickle cell disease or splenectomy); and for persons with immunocompromising conditions. For persons aged 65 years and older, one-time revaccination is recommended if they were vaccinated 5 or more years previously and were aged less than 65 years at the time of primary vaccination.

9. Meningococcal vaccination
Meningococcal vaccine should be administered to persons with the following indications:
- Medical: A 2-dose series of meningococcal conjugate vaccine is recommended for adults with anatomic or functional asplenia, or persistent complement component deficiencies.
- Adults with HIV infection who are vaccinated should also receive a routine 2-dose series. The 2 doses should be administered at 0 and 2 months.

Other: A single dose of meningococcal vaccine is recommended for unvaccinated first-year college students living in dormitories; microbiologists routinely exposed to isolates of Neisseria meningitides; military recruits; and persons who travel to or live in countries in which meningococcal disease is hyperendemic or epidemic (e.g., the "meningitis belt" of sub-Saharan Africa during the dry season [December through June]), particularly if their contact with local populations will be prolonged. Vaccination is required by the government of Saudi Arabia for all travelers to Mecca during the annual Hajj.

Meningococcal conjugate vaccine, quadrivalent (MCV4) is preferred for adults with any of the preceding indications who are aged 55 years and older, meningococcal polysaccharide vaccine (MPSV4) is preferred for adults aged 16 years and older. Revaccination with MCV4 every 5 years is recommended for adults previously vaccinated with MCV4 or MPSV4 who remain at increased risk for infection (e.g., adults with anatomic or functional asplenia, or persistent complement component deficiencies).
10. Hepatitis A vaccination
Vaccinate persons with any of the following indications and any person seeking protection from hepatitis A virus (HAV) infection:

- Behavioral: Men who have sex with men and persons who use injection drugs.
- Occupational: Persons working with HAV-infected primates or with HAV in a research laboratory setting.
- Medical: Persons with chronic liver disease and persons who receive clotting factor concentrates.
- Other: Persons traveling to or working in countries that have high or intermediate endemicity of hepatitis A (a list of countries is available at http://www.cdc.gov/travel/contentdiseases.aspx).

Unvaccinated persons who anticipate close personal contact (e.g., household or regular babysitting) with an international adoptee during the first 60 days after arrival in the United States from a country with high or intermediate endemicity should be vaccinated. The first dose of the 2-dose hepatitis A vaccine series should be administered as soon as adoption is planned, ideally 2 or more weeks before the arrival of the adoptee.

- Single-antigen vaccine formulations should be administered in a 2-dose schedule at either 0 and 6–12 months (Havrix), or 0 and 6–18 months (Vaxalta). If the combined hepatitis A and hepatitis B vaccine (Twynertia) is used, administer 3 doses at 0, 1, and 6 months; alternatively, a 4-dose schedule may be used, administered on days 0, 7, and 21–30, followed by a booster dose at month 12.

11. Hepatitis B vaccination
Vaccinate persons with any of the following indications and any person seeking protection from hepatitis B virus (HBV) infection:

- Behavioral: Sexually active persons who are not in a long-term, mutually monogamous relationship (e.g., persons with more than one sex partner during the previous 6 months); persons seeking evaluation or treatment for a sexually transmitted disease (STD); current or recent injection-drug users; and men who have sex with men.
- Occupational: Healthcare personnel and public-safety workers who are exposed to blood or other potentially infectious body fluids.
- Medical: Persons with end-stage renal disease, including patients receiving hemodialysis; persons with HIV infection; and persons with chronic liver disease.
- Other: Household contacts and sex partners of persons with chronic HBV infection; clients and staff members of institutions for persons with developmental disabilities; and international travelers to countries with high or intermediate prevalence of chronic HBV infection (a list of countries is available at http://www.cdc.gov/travel/contentdiseases.aspx).

Hepatitis B vaccination is recommended for all adults in the following settings: STD treatment facilities; HIV testing and treatment facilities; facilities providing drug-abuse treatment and prevention services; healthcare settings targeting services to injection-drug users or men who have sex with men; correctional facilities; end-stage renal disease programs and facilities for chronic hemodialysis patients; and institutions and nonresidential day-care facilities for persons with developmental disabilities.

- Administer missing doses to complete a 3-dose series of hepatitis B vaccine to those persons not vaccinated or not completely vaccinated. The second dose should be administered 1 month after the first dose; the third dose should be given at least 2 months after the second dose (and at least 4 months after the first dose). If the combined hepatitis A and hepatitis B vaccine (Twynertia) is used, administer 3 doses at 0, 1, and 6 months; alternatively, a 4-dose Twynertia schedule, administered on days 0, 7, and 21 to 30, followed by a booster dose at month 12 may be used.
- Adult patients receiving hemodialysis or with other immunocompromising conditions should receive 1 dose of 40 μg/mL (Recombivax HB) administered on a 3-dose schedule or 2 doses of 20 μg/mL (Engerix-B) administered simultaneously on a 4-dose schedule at 0, 1, 2, and 6 months.

12. Selected conditions for which Haemophilus influenzae type b (Hib) vaccine may be used
- 1 dose of Hib vaccine should be considered for persons who have sickle cell disease, leukemia, or HIV infection, or who have had a splenectomy, if they have not previously received Hib vaccine.

13. Immunocompromising conditions
Inactivated vaccines generally are acceptable (e.g., pneumococcal, meningococcal, influenza [inactivated influenza vaccine]) and live vaccines generally are avoided in persons with immune deficiencies or immunocompromising conditions. Information on specific conditions is available at http://www.cdc.gov/vaccines/pubs/acip-list.htm.
SELECTING AN APPROPRIATE SANITIZER OR DISINFECTANT

One of the most important steps in reducing the spread of infectious diseases in child care settings is cleaning, sanitizing or disinfecting surfaces that could possibly pose a risk to children or staff. Routine cleaning with detergent and water is the most common method for removing some germs from surfaces in the child care setting. However, most items and surfaces in a child care setting require sanitizing or disinfecting after cleaning to further reduce the number of germs on a surface to a level that is unlikely to transmit disease.

What is the difference between sanitizing and disinfecting?

Sometimes these terms are used as if they mean the same thing, but they are not the same.

**Sanitizer** is a product that reduces but does not eliminate germs on inanimate surfaces to levels considered safe by public health codes or regulations. A sanitizer may be appropriate to use on food contact surfaces (dishes, utensils, cutting boards, high chair trays), toys that children may place in their mouths, and pacifiers. See Appendix K, Routine Schedule for Cleaning, Sanitizing and Disinfecting for guidance on use of sanitizer vs. disinfectant.

**Disinfectant** is a product that destroys or inactivates germs (but not spores) on an inanimate object. A disinfectant may be appropriate to use on hard, non-porous surfaces such as diaper change tables, counter tops, door & cabinet handles, and toilets and other bathroom surfaces. See Appendix K, Routine Schedule for Cleaning, Sanitizing and Disinfecting for guidance on use of sanitizer vs. disinfectant.

The U.S. Environmental Protection Agency (EPA) recommends that only EPA-registered products be used. Only a sanitizer or disinfectant product with an EPA registration number on the label can make public health claims that they are effective in reducing or inactivating germs. Many bleach and hydrogen peroxide products are EPA-registered and can be used to sanitize or disinfect. Please see the “How to Find EPA Registration Information” section below to learn more specific information on the products.

Always follow the manufactures’ instructions when using EPA-registered products described as sanitizers or disinfectants. This includes pre-cleaning, how long the product needs to remain wet on the surface or item, whether or not the product should be diluted or used as is, and if rinsing is needed. Also check to see if that product can be used on a food contact surface or is safe for use on items that may go into a child’s mouth. Please note that the label instructions on most sanitizers and disinfectants indicate that the surface must be pre-cleaned before applying the sanitizer or disinfectant.

Are there alternatives to chlorine bleach?

A product that is not chlorine bleach can be used in child care settings IF:

- it is registered with the EPA;
- it is also described as a sanitizer or as a disinfectant;
- it is used according to the manufacturer’s instructions.

Check the label to see how long you need to leave the sanitizer or disinfectant in contact with the surface you are treating, whether you need to rinse it off before contact by children, for any precautions when handling, and whether it can be used on a surface that may come in contact with child’s mouth.
Some child care settings are using products with hydrogen peroxide as the active ingredient instead of chlorine bleach. Check to see if the product has an EPA registration number and follow the manufacturer’s instructions for use and safe handling. (Please see the “How to Find EPA Registration Information” section below for more information.) Remember that EPA-registered products will also have available a Material Safety Data Sheet (MSDS) that will provide instructions for the safe use of the product and guidance for first aid response to an accidental exposure to the chemical.

In addition, some manufacturers of sanitizer and disinfectant products have developed “green cleaning products” that have EPA registration. As new environmentally-friendly cleaning products appear in the market, check to see if they are EPA-registered.

**Household Bleach & Water**

Many household bleach products are now EPA-registered. When purchasing EPA-registered chlorine bleach, make sure that the bleach concentration is for household use, and not for industrial applications. Household chlorine bleach is typically sold in retail stores as an 8.25% sodium hypochlorite solution.

EPA-registered bleach products are described as sanitizers and disinfectants. Check the label to see if the product has an EPA registration number and follow the manufacturer’s safety and use instructions. (Please see the “How to Find EPA Registration Information” section below for more information.) Pay particular attention to the mixing “recipe” and the required contact time (i.e., the time the solution must remain on a surface to be effective) for each use. Remember, the recipe and contact time are most likely different for sanitizing and disinfecting.

If you are not using an EPA-registered product for sanitizing and disinfecting, please be sure you are following state or local recommendations and/or manufacturer’s instructions for creating safe dilutions necessary to sanitize and/or disinfect surfaces in your early care and education environment. Using too little (a weak concentration) bleach may make the mixture ineffective; however, using too much (a strong concentration) bleach may create a potential health hazard.

**To safely prepare bleach solutions:**

- Dilute bleach with cool water and do not use more than the recommended amount of bleach.
- Select a bottle made of opaque material.
- Make a fresh bleach dilution daily; label the bottle with contents and the date mixed.
- Wear gloves and eye protection when diluting bleach.
- Use a funnel.
- Add bleach to the water rather than the water to bleach to reduce fumes.
- Make sure the room is well ventilated.
- Never mix or store ammonia with bleach or products that contain bleach.
To safely use bleach solutions:

- Apply the bleach dilution after cleaning the surface with soap or detergent and rinsing with water if visible soil is present.
- If using a spray bottle, adjust the setting to produce a heavy spray instead of a fine mist.
- Allow for the contact time specified on the label of the bleach product.
- Apply when children are not present in the area.
- Ventilate the area by allowing fresh air to circulate and allow the surfaces to completely air dry or wipe dry after the required contact time before allowing children back into the area.
- Store all chemicals securely, out of reach of children and in a way that they will not tip and spill.

Adapted from: California Childcare Health Program. 2013. Safe and Effective Cleaning sanitizing and Disinfecting. Health and Safety Notes (March).

To Review:

- Determine if the surface requires sanitizing or disinfecting;
- Check the labels of all products to see if they are EPA-registered; there are alternatives to chlorine bleach;
- Many chlorine bleach products (8.25% sodium, hypochlorite) are now EPA-registered
  - If EPA-registered, you must follow the label instructions for “recipes” and contact times;
- If using non-EPA-registered products, follow state or local recommendations for “recipes” and contact times;
- Prepare and use the solutions safely;
- Use products that are safe for oral contact when used on food contact surfaces or on items that may mouthed by children.

How to Find EPA Registration Information

The following information is intended to serve as a visual guide to locating EPA registration numbers and product label information. Any products featured in the examples below are used for illustrative purpose only, and do not represent an endorsement by the National Resource Center for Health and Safety in Child Care and Early Education (NRC). The NRC does not endorse specific products.

1. Locate the EPA Registration number on the product label:
2. Go to [http://iaspub.epa.gov/apex/pesticides/f?p=PPLS:1](http://iaspub.epa.gov/apex/pesticides/f?p=PPLS:1). Enter this number into the box titled “EPA Registration Number” and click the Search button:
3. You should see the details about the product, and beneath that, a portable document file (PDF) bearing the date that this product was registered by the EPA (if there is a list, the PDF at the top of the list should show the most recent approval). Click on that most recently-approved PDF. You will need a PDF file reader to access this file. There are a variety of readers available and most are free.
4. The PDF should come up on your screen. Scroll down to the section that shows the directions for using the product as a sanitizer or disinfectant. Follow the directions listed for your intended use.
A Final Note

Remember that any cleaning, sanitizing or disinfecting product must always be safely stored out of reach of children. Always follow the manufacturer’s instruction for safe handling to protect yourselves and those in your care.

References:


### Routine Schedule** for Cleaning, Sanitizing, and Disinfecting

<table>
<thead>
<tr>
<th>Areas</th>
<th>Before Each Use</th>
<th>After Each Use</th>
<th>Daily (At the End of the Day)</th>
<th>Weekly</th>
<th>Monthly</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Food Areas</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Food preparation surfaces</td>
<td>Clean, Sanitize</td>
<td>Clean, Sanitize</td>
<td></td>
<td></td>
<td></td>
<td>Use a sanitizer safe for food contact</td>
</tr>
<tr>
<td>• Eating utensils &amp; dishes</td>
<td></td>
<td>Clean, Sanitize</td>
<td></td>
<td></td>
<td></td>
<td>If washing the dishes and utensils by hand, use a sanitizer safe for food contact as the final step in the process; Use of an automated dishwasher will sanitize</td>
</tr>
<tr>
<td>• Tables &amp; highchair-trays</td>
<td>Clean, Sanitize</td>
<td>Clean, Sanitize</td>
<td></td>
<td></td>
<td></td>
<td>Use a sanitizer safe for food contact</td>
</tr>
<tr>
<td>• Countertops</td>
<td>Clean</td>
<td>Clean, Sanitize</td>
<td></td>
<td></td>
<td></td>
<td>Use a sanitizer safe for food contact</td>
</tr>
<tr>
<td>• Food preparation appliances</td>
<td>Clean</td>
<td>Clean, Sanitize</td>
<td></td>
<td></td>
<td></td>
<td>Use a sanitizer safe for food contact</td>
</tr>
<tr>
<td>• Mixed use tables</td>
<td>Clean, Sanitize</td>
<td>Clean</td>
<td></td>
<td></td>
<td></td>
<td>Before serving food</td>
</tr>
<tr>
<td>• Refrigerator</td>
<td></td>
<td>Clean</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Child Care Areas</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Plastic mouthing toys</td>
<td>Clean</td>
<td>Clean, Sanitize</td>
<td></td>
<td></td>
<td></td>
<td>Reserve for use by only one child; Use dishwasher or boil for one minute</td>
</tr>
<tr>
<td>• Pacifiers</td>
<td>Clean</td>
<td>Clean, Sanitize</td>
<td></td>
<td></td>
<td></td>
<td>Clean after each use if head lice present</td>
</tr>
<tr>
<td>• Hats</td>
<td>Clean</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Door &amp; cabinet handles</td>
<td>Clean, Sanitize</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Corrected to "Routine Schedule" from "Guide" in second printing, August 2011.
## Appendix K

<table>
<thead>
<tr>
<th>Floors</th>
<th>Clean</th>
<th>Sweep or vacuum, then damp mop, (consider micro fiber damp mop to pick up most particles)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Machine washable cloth toys</td>
<td>Clean</td>
<td>Launder</td>
</tr>
<tr>
<td>Dress-up clothes</td>
<td>Clean</td>
<td>Launder</td>
</tr>
<tr>
<td>Play activity centers</td>
<td>Clean</td>
<td></td>
</tr>
<tr>
<td>Drinking Fountains</td>
<td>Clean, Disinfect</td>
<td></td>
</tr>
<tr>
<td>Computer keyboards</td>
<td>Clean, Sanitize</td>
<td>Use sanitizing wipes, do not use spray</td>
</tr>
<tr>
<td>Phone receivers</td>
<td>Clean</td>
<td></td>
</tr>
</tbody>
</table>

### Toilet & Diapering Areas

<table>
<thead>
<tr>
<th>Changing tables</th>
<th>Clean, Disinfect</th>
<th>Clean with detergent, rinse, disinfect</th>
</tr>
</thead>
<tbody>
<tr>
<td>Potty chairs</td>
<td>Clean, Disinfect</td>
<td></td>
</tr>
<tr>
<td>Handwashing sinks &amp; faucets</td>
<td>Clean, Disinfect</td>
<td></td>
</tr>
<tr>
<td>Countertops</td>
<td>Clean, Disinfect</td>
<td></td>
</tr>
<tr>
<td>Toilets</td>
<td>Clean, Disinfect</td>
<td></td>
</tr>
<tr>
<td>Diaper pails</td>
<td>Clean, Disinfect</td>
<td></td>
</tr>
<tr>
<td>Floors</td>
<td>Clean, Disinfect</td>
<td>Damp mop with a floor cleaner / disinfectant</td>
</tr>
</tbody>
</table>

### Sleeping Areas

<table>
<thead>
<tr>
<th>Bed sheets &amp; pillow cases</th>
<th>Clean</th>
<th>Clean before use by another child</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cribs, cots, &amp; mats</td>
<td>Clean</td>
<td>Clean before use by another child</td>
</tr>
<tr>
<td>Blankets</td>
<td>Clean</td>
<td></td>
</tr>
</tbody>
</table>
**CARE PLAN FOR CHILDREN WITH SPECIAL HEALTH NEEDS**

*To be completed by a Health Care Provider*

<table>
<thead>
<tr>
<th>Child's Full Name</th>
<th>Date of Birth</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parent/Guardian's Name</td>
<td>Telephone No.</td>
</tr>
<tr>
<td>Primary Health Care Provider</td>
<td>Telephone No.</td>
</tr>
<tr>
<td>Specialty Provider</td>
<td>Telephone No.</td>
</tr>
</tbody>
</table>

**Allergies**

**ROUTINE CARE**

<table>
<thead>
<tr>
<th>Medication To Be Given at Child Care</th>
<th>Schedule/Dose (When and How Much?)</th>
<th>Route (How?)</th>
<th>Reason Prescribed</th>
<th>Possible Side Effects</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

List medications given at home:

**NEEDED ACCOMMODATION(S)**

Describe any needed accommodation(s) the child needs in daily activities and why:
- Diet or Feeding:
- Classroom Activities:
- Naptime/Sleeping:
- Toileting:
- Outdoor or Field Trips:
- Transportation:
- Other:
- Additional comments:

DH-16
MAR 05
Source: New Jersey Department of Health and Senior Services, 2005.
## CARE PLAN FOR CHILDREN WITH SPECIAL HEALTH NEEDS

### Special Equipment / Medical Supplies

1. 
2. 
3. 

### Emergency Care

**Call Parents/Guardians** if the following symptoms are present:


**Call 911 (Emergency Medical Services)** if the following symptoms are present, as well as contacting the parents/guardians:


**Take These Measures** while waiting for parents or medical help to arrive:


### Suggested Special Training for Staff


### Parent Notes (Optional)

I hereby give consent for my child’s health care provider or specialist to communicate with my child’s child care provider or school nurse to discuss any of the information contained in this care plan.

Parent/Guardian Signature: ___________________________ Date: _____________

### Important

In order to ensure the health and safety of your child, it is vital that any person involved in the care of your child be aware of your child’s special health needs, medication your child is taking, or needs in case of a health care emergency, and the specific actions to take regarding your child’s special health needs.
Appendix O

Special Health Care Plan

The special health care plan defines all members of the care team, communication guidelines (how, when, and how often), and all information on appropriately accommodating the special health concerns and needs of this child while in child care.

Name of Child: ____________________________ Date: ____________________________

Facility Name: ____________________________

Description of condition(s): (include description of difficulties associated with each condition)


Team Member Names and Titles (parents of the child are to be included)

Care Coordinator (responsible for developing and administering the Special Health Care Plan):


Outside Professionals Involved

Health Care Provider (MD, NP, etc.): ____________________________

Speech & Language Therapist: ____________________________

Occupational Therapist: ____________________________

Physical Therapist: ____________________________

Psychologist/Mental Health Consultant: ____________________________

Social Worker: ____________________________

Family-Child Advocate: ____________________________

Other: ____________________________

☐ If training is necessary, then all team members will be trained.

☐ Individualized Family Service Plan (IFSP) attached ☐ Individualized Education Plan (IEP) attached

Telephone

__________________________________________

Outside Professionals Involved

__________________________________________

Communication

How the team will communicate (notes, communication log, phone calls, meetings, etc.):

__________________________________________

How often will team communication occur: ☐ Daily ☐ Weekly ☐ Monthly ☐ Bi-monthly ☐ Other ____________________________

Date and time specifies: ____________________________
Specific Medical Information

* Medical documentation provided and attached: □ Yes □ No

□ Information Exchange Form completed by health care provider is in child’s file on site.

* Medication to be administered: □ Yes □ No

□ Medication Administration Form completed by health care provider and parents are in child’s file on site (including type of medication, method, amount, time administration, potential adverse effects, etc.)

Any known allergies to foods and/or medications: ____________________________

Specific health-related needs: ______________________________________________

________________________________________________________________________

Planned strategies to support the child’s needs and any safety issues while in child care: (diapers/toileting, outdoor play, circle time, napping, etc.): ____________________________

________________________________________________________________________

Plan for absences of personnel trained and responsible for health-related procedure(s): ____________________________

________________________________________________________________________

Other (i.e., transportation, field trips, etc.): ____________________________

________________________________________________________________________

Special Staff Training Needs

Training monitored by: ____________________________

1) Type (be specific): ____________________________

Training done by: ____________________________ Date of Training: ____________________________

2) Type (be specific): ____________________________

Training done by: ____________________________ Date of Training: ____________________________

3) Type (be specific): ____________________________

Training done by: ____________________________ Date of Training: ____________________________

Equipment/Positioning

* Physical Therapist (PT) and/or Occupational Therapist (OT) consult provided: □ Yes □ No □ Not Needed

Special equipment needed/to be used: ____________________________

Positioning requirements (attach additional documentation as necessary): ____________________________

Equipment care/maintenance notes: ____________________________
Appendix O

Nutrition and Feeding Needs

☐ Nutrition and Feeding Care Plan Form completed by team is in child’s file on-site. (See for detailed requirements below.)

Behavior Changes (be specific when listing changes in behavior that arise as a result of the health-related condition/ concerns)

__________________________________________________________________________________________

__________________________________________________________________________________________

Additional Information (include any unusual episodes that might arise while in care and how the situation should be handled)

__________________________________________________________________________________________

__________________________________________________________________________________________

Support Programs the Child Is Involved with Outside of Child Care

1. Name of program: __________________________ Contact person: __________________________
   Address and telephone: __________________________
   Frequency of attendance: __________________________

2. Name of program: __________________________ Contact person: __________________________
   Address and telephone: __________________________
   Frequency of attendance: __________________________

   ☐

3. Name of program: __________________________ Contact person: __________________________
   Address and telephone: __________________________
   Frequency of attendance: __________________________

Emergency Procedures

☐ Special emergency and/or medical procedure required (additional documentation attached)

Emergency instructions: ________________________________________________________________

__________________________________________________________________________________________

Emergency contact: __________________________ Telephone: __________________________

Follow-up: Updates/Revisions

This Special Health Care Plan is to be updated/revised whenever child’s health status changes or at least every _______ months as a result of the collective input from team members.

Due date for revision and team meeting: __________________________
**Nutrition and Feeding Care Plan**

The nutrition and feeding care plan defines all members of the care team, communication guidelines (how, when, and how often), and all information on a child's diet and feeding needs for this child while in child care.

Name of Child: ____________________________  Date: ____________________________

Facility Name:___________________________________________________________________

**Team Member Names and Titles** (parents of the child are to include):

* Care Coordinator (responsible for developing and monitoring Nutrition and Feeding Care Plan):

* If training is necessary, then all team members will be trained.

* Individualized Family Service Plan (IFSP) attached  □ Individualized Education Plan (IEP) attached

**Communication**

What is the team's communication goal and how will it be achieved (notes, communication eg. phone calls, meetings, etc.):

How often will team communication occur: □ Daily  □ Weekly  □ Monthly  □ Bi-monthly  □ Other __________________________

Date and time specifics:

**Specific Diet Information**

* Medical documentation provided and attached: □ Yes  □ No  □ Not Needed

Specific nutrition/feeding-related needs and any safety issues:

* Foods to avoid (allergies and/or intolerances):

Planned strategies to support the child's needs:

Plan for absences of personnel trained and responsible for nutrition/feeding-related procedure(s):

* Food texture/consistency needs:
* Special dietary needs:__________________________
* Other:______________________________________

**Eating Equipment/Positioning**

* Physical Therapist (PT) and/or Occupational Therapist (OT) consult provided □ Yes  □ No  □ Not Needed

Special equipment needed:

Specific body positioning for feeding (attach additional documentation as necessary):__________________________
Appendix O

Behavior Changes (be specific: where, when, changes in behavior that arise before, during, or after feeding/ingesting)

Medical Information

☐ Information Exchange Form completed by Health Care Provider is in child’s file onsite.

☐ Medication to be administered as part of feeding routine: ☐ Yes ☐ No

☐ Medication Administration Form completed by health care provider and parents is in child’s file onsite (including type of medication, who administers, when administered, potential side effects, etc.)

Tube Feeding Information

Primary person responsible for daily feeding: ________________

Additional person to support feeding: ________________

☐ Breast Milk ☐ Formula (list brand information): ________________

Time(s) of day: ________________

Volume (how much to feed): ________________ Rate of flow: ________________ Length of feeding: ________________

Position of child: ________________

☐ Oral feeding and/or stimulation (attach detailed instructions as necessary): ________________

Special Training Needed by Staff

Training monitored by: ________________

1) Type (be specific): ________________

Training done by: ________________ Date of Training: ________________

2) Type (be specific): ________________

Training done by: ________________ Date of Training: ________________

Additional Information (include any unusual episodes that might arise while in care and how the situation should be handled):

Emergency Procedures

☐ Special emergency and/or medical procedure required (additional documentation attached)

Emergency instructions: ________________

Emergency contact: ________________ Telephone: ________________

Follow-up: Updates/Revisions

This Nutrition and Feeding Care Plan is to be updated/revised whenever child’s health status changes or at least every ___ months as a result of the collective input from team members.

Due date for revision and team meeting: ________________
# America’s Playgrounds
## Safety Report Card

**Does your playground make the grade?**
Evaluate your playground using the following criteria.
A full explanation of the criteria is on the following page.

<table>
<thead>
<tr>
<th><strong>Supervision</strong></th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adults present when children are on equipment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Children can be easily viewed on equipment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Children can be viewed in crawl spaces</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rules posted regarding expected behavior</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Age-Appropriate Design</strong></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Playgrounds have separate areas for ages 2-5 and 5-12</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Platforms have appropriate guardrails</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Platforms allow change of directions to get on/off structure</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Signage indicating age group for equipment provided</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Equipment design prevents climbing outside the structure</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Supporting structure prevents climbing on it</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Fall Surfacing</strong></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Suitable surfacing materials provided</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Height of all equipment is 8 feet or lower</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Appropriate depth of loose fill provided</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Six foot use zone has appropriate surfacing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Concrete footings are covered</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Surface free of foreign objects</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Equipment Maintenance</strong></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Equipment is free of noticeable gaps</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Equipment is free of head entrapments</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Equipment is free of broken parts</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Equipment is free of missing parts</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Equipment is free of protruding bolts</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Equipment is free of rust</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Equipment is free of splinters</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Equipment is free of cracks/holes</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Scoring System
Total the number of "Yes" answers in the "Total Points" box in the table.

- **24 – 20 = A**
  Congratulations on having a SAFE playground. Please continue to maintain this excellence.
- **19 – 17 = B**
  Your playground is on its way to providing a safe environment for children. Work on the areas checked 'No'.
- **16 – 13 = C**
  Your playground is potentially hazardous for children. Take corrective measures.
- **12 – 8 = D**
  Children are at risk on this playground. Start to make improvements.
- **7 & = F**
  Do not allow children on this playground. Make changes immediately.

**“If any of the gray boxes are marked ‘NO,’ the potential of a life-threatening injury is significantly increased. Contact the owner of the playground.”**

For Additional Resources and Information Contact:
National Program for Playground Safety: 1-800-554-PLAY (7529)  ~ www.playgroundssafety.org
Appendix EE

Explanation of Risk Factor Criteria

SUPERVISION

1. Since equipment can’t supervise children, it is important that adult supervision is present when children are playing on the playground.
2. In order to properly supervise, children need to be seen. This question is asking if there are any blind spots where children can hide out of the sight of the supervisor.
3. Many crawl spaces, tunnels, and boxed areas have plastic or some type of transparent material present to allow the supervisor to see that a child is inside the space. When blind tunnels are present, children cannot be properly supervised.
4. Rules help reinforce expected behavior. Therefore, the posting of playground rules is recommended. For children ages 2-5, no more than three rules should be posted. Children over the age of five will remember five rules. These rules should be general in nature, such as “respect each other and take turns.”

AGE APPROPRIATE DESIGN

1. It is recommended that playgrounds have separate areas with appropriately sized equipment and materials to serve ages 2-5 and ages 5-12. Further, the intended use group should be obvious from the design and scale of equipment. In playgrounds designed to serve children of all ages, the layout of pathways and the landscaping of the playground should show the distinct areas for the different age groups. The areas should be separated at least by a buffer zone, which could be an area with shrubs or benches.
2. Either guardrails or protective barriers may be used to prevent inadvertent or unintentional falls off elevated platforms. However, to provide greater protection, protective barriers should be designed to prevent intentional attempts by children.
3. Platforms over six feet in height should provide an intermediate landing surface where a decision can be made to halt the ascent or to pursue an alternative route of descent.
4. Signs posted in the playground area can be used to give some guidance to adults as to the age appropriateness of equipment.
5. Children use equipment in creative ways which are not necessarily what the manufacturer intended when designing the piece. Certain equipment pieces, like high tube slides, can put the child at risk if they can easily climb on the outside of the piece. The answer to this question is a judgment on your part as to whether the piece was designed to minimize risk to the child for injury from a fall.
6. Support structures such as long poles, bars, swing frames, etc. become the play activity. The problem is that many times these structures have no safe surfacing underneath and children fall from dangerous heights to hard surfaces.

FALL SURFACING

1. Appropriate surfaces are either loose fill (engineered wood fiber, sand, play wood, or shredded tires) or unitary surfaces (rubber tiles, rubber mats, and poured-in-place rubber). Inappropriate surface materials are asphalt, concrete, dirt, and grass. It should be noted that falls from 1 ft. onto concrete could cause a concussion. Falls from a height of eight feet onto dirt is the same as a child hitting a brick wall traveling 30 mph.
2. Research has shown that equipment heights can double the probability of a child getting injured. We recommend that the height of equipment for pre-school age children be no higher than 6 feet and the height of equipment for school age children be limited to 8 feet.
3. Proper loose fill surfacing must be at the appropriate depth to cushion falls. An inch of sand upon hard packed dirt will not provide any protection. We recommend 12 inches of loose fill material under and around playground equipment.
4. Appropriate surfacing should be located directly underneath equipment and extend six feet in all directions with the exceptions of slides and swings, which have a longer use zone.
5. You should not be able to see concrete footings around any of the equipment. Depths or permanent disabilities have occurred from children falling off equipment and striking their heads on exposed footings.
6. Glass, bottle caps, needles, trash, etc. can cause injury if present on playground surfaces.

EQUIPMENT MAINTENANCE

1. Strangulation is the leading cause of playground fatalities. Some of these deaths occur when drawstrings on sweatshirts, coats, and other clothing get caught in gaps in the equipment. The area on top of slides is one potential trouble spot.
2. Entrapment places include between guardrails and underneath merry-go-rounds. Head entrapment occurs when the body fits through a space but the child’s head cannot pass through the same space. This occurs because generally, young children’s heads are larger than their bodies. If the space between two parts (usually guardrails) is more than three and a half inches then it must be greater than nine inches to avoid potential entrapment.
3. Broken equipment pieces are accidents waiting to happen. If a piece of equipment is broken, measures need to be taken to repair the piece. In the meantime, children should be kept off the equipment.
4. Missing parts also create a playground hazard. A rung missing from a ladder, which is the major access point to a piece of equipment, poses an unnecessary injury hazard for the child.
5. Protruding bolts or fixtures can cause problems with children running into equipment or catching clothing. Therefore, they pose a potential safety hazard.
6. Exposed metal will rust. This weakens the equipment and will eventually create a serious playground hazard.
7. Wood structures must be treated on a regular basis to avoid weather related problems such as splinters. Splintering can cause serious injuries to children.
8. Plastic equipment may crack or develop holes due to temperature extremes and/or vandalism. This is a playground hazard.

*If these risk factors are missing, the potential for a life-threatening injury is significantly increased.

2006 National Program for Playground Safety
Playground Safety Report Card Follow-up

For any item checked NO on the Playground Safety (PS) Report card, indicate how the item will be remedied and the date of completion.

<table>
<thead>
<tr>
<th>Highlight any item checked NO from the PS Report Card</th>
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<th>Date completed</th>
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<tr>
<td><strong>SUPERVISION</strong></td>
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<tr>
<td>Adults present when children are on equipment</td>
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</tr>
<tr>
<td>Children can be easily viewed on equipment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Children can be viewed in crawl spaces</td>
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<td></td>
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<tr>
<td>Rules posted regarding expected behavior</td>
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<td></td>
</tr>
<tr>
<td><strong>AGE-APPROPRIATE DESIGN</strong></td>
<td></td>
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</tr>
<tr>
<td>Playgrounds have separate areas for ages 2-5 and 5-12</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Platforms have appropriate guardrails</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Platforms allow change of directions to get on/off structure</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Signage indicating age group for equipment provided</td>
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<td></td>
</tr>
<tr>
<td>Equipment design prevents climbing outside the structure</td>
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<td></td>
</tr>
<tr>
<td>Supporting structure prevents climbing on it</td>
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<td></td>
</tr>
<tr>
<td><strong>FALL SURFACING</strong></td>
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<td></td>
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<tr>
<td>Suitable surfacing materials provided</td>
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<tr>
<td>Height of all equipment is 8 feet or lower</td>
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<td></td>
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<tr>
<td>Appropriate depth of loose fill provided</td>
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<td></td>
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<tr>
<td>Six foot use zone has appropriate surfacing</td>
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<td></td>
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<tr>
<td>Concrete footings are covered</td>
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<tr>
<td>Surface free of foreign objects</td>
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<td></td>
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<tr>
<td><strong>EQUIPMENT MAINTENANCE</strong></td>
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<tr>
<td>Equipment is free of noticeable gaps</td>
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<td></td>
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<tr>
<td>Equipment is free of head entrapments</td>
<td></td>
<td></td>
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<tr>
<td>Equipment is free of broken parts</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Equipment is free of missing parts</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Equipment is free of protruding bolts</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Equipment is free of rust</td>
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<td></td>
</tr>
<tr>
<td>Equipment is free of splinters</td>
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<td></td>
</tr>
<tr>
<td>Equipment is free of cracks/holes</td>
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</table>

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Third Edition Methodology

Stepping Stones to Caring for Our Children, Third Edition (SS3), is a companion document to Caring for Our Children: National Health and Safety Performance Standards; Guidelines for Early Care and Education Programs (CFOC3), published in 2011. Stepping Stones is the collection of standards from CFOC3 most likely to prevent serious adverse outcomes in child care and early education settings. Development of SS3 was initiated in 2012 and completed in 2013 under the leadership of Marilyn J. Krajicek, EdD, RN, FAAN, Director of the National Resource Center for Health and Safety in Child Care (NRC). More than 120 outside experts also contributed to the development of SS3.

The NRC SS3 process was informed by the advice of an external Methodology Committee, convened to provide guidance on the standard selection procedures, while retaining the emphasis on prevention of serious harm. The Methodology Committee was composed of three experts in research methods, two of whom were also national experts in child care health and safety.¹

Preliminary Focus Group: National stakeholders in early care and education and users of Stepping Stones to Caring for Our Children, Second Edition (SS2) participated in discussions of methods to enhance the format and usability of SS3. These focus group findings were used to influence both the format and dissemination of SS3. For example, a significant number of stakeholders preferred a more concise document when compared to SS2. While recognizing that every SS2 standard served to reduce morbidity and mortality, the charge in SS3 was to more directly target standards that are critical to prevent the most severe outcomes. The third edition reflects that concern in that the number of standards is reduced from the 233 in SS3 to the current 138.

Stages of SS3 Development

1) Identified standards as candidates for SS3: The initial pool of potential SS3 standards consisted of:
   a. 211 SS2 standards that were retained or combined in CFOC3;
   b. 56 Standards new to CFOC3;
   c. 36 Standards significantly revised for CFOC3; and
   d. 41 Additional CFOC3 standards identified by a key term/word search (i.e., abuse, death, infectious, injure, injuries, injury,

¹ The Methodology Committee included Abbey Alkon, RN, PNP, PhD, Professor, University of California, San Francisco School of Nursing Director, California Childcare Health Program; Dr Richard Fiene, Director, Research Institute for Key Indicators & Retired HDFS Professor, Penn State University; and Paul Cook, PhD, Director, Center for Nursing Research, College of Nursing, University of Colorado Denver.
concuss, disable, disease(s), drowning, fatal, neglect, organisms, poisoning, risk, and spread).

2) **Rated candidate standards.** Each of the 344 candidate standards identified through the methods listed above was rated on the severity and frequency of adverse outcomes if the standard were not followed in the child care environment. Ratings were conducted by 10 subject-specific Technical Panels, consisting of 61 experts overall who previously worked on development of CFOC3. All standards were rated by multiple people and most standards were rated by multiple panels.

3) **Analyzed ratings and selected standards.** Since each Panel rated a different number of standards, the highest-rated standards were selected from each of the 10 Panels’ results in proportion to the number of standards each Panel rated. The objective range was a total number between 100 and 150 standards. This process resulted in 127 standards for the first draft of SS3.

4) **Reviewed first draft of SS3.** National stakeholders were invited to review the 127 standards. The stakeholders included representatives of national organizations, caregivers/teachers, regulators/licensing specialists, early care and education advocates, health professionals, safety specialists, early childhood educators, health and mental health consultants, and federal, military, and state agencies that promote and implement health and safety in the child care field. Reviewers were asked to recommend additional key evidence-based standards from CFOC3 that were not included in the list, with accompanying rationale and evidence-based research, or the deletion of CFOC3 standards based on compelling rationale.

5: **Analyzed and considered reviewer comments and recommendations.** The Methodology Committee and NRC staff evaluated the stakeholder comments, recommendations, and evidence using a comparative rating method. Evaluation of reviewers’ recommendations for additions and deletions resulted in the 138 standards selected for SS3.

6: **Final review and release.** The final draft of SS3 was reviewed by the Steering Committee of the NRC and the partner organizations, AAP, APHA, and MCHB prior to its release online in April, 2013.

**SS3 Methodology Timeline**

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<thead>
<tr>
<th>Step 1</th>
<th>Step 2</th>
<th>Step 3</th>
<th>Step 4</th>
<th>Step 5</th>
<th>Step 6</th>
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<td>Identified CFOC3 Standards for Consideration</td>
<td>Rated Standards for Possible Inclusion</td>
<td>Analyzed Ratings and Selected Standards</td>
<td>Created and Reviewed 1st Draft</td>
<td>Analyzed Reviewer Comments</td>
<td>Final Review by Partners &amp; Release</td>
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<tr>
<td>6-7/12</td>
<td>8-10/12</td>
<td>11-12/12</td>
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### Conversion Table: Third Edition to Second Edition

#### Chapter 1 - Staffing

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<th>2nd Ed. #</th>
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<td>1.1.1.1</td>
<td>1.001</td>
<td>Ratios for Small Family Child Care Homes</td>
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<td>Ratios for Large Family Child Care Homes and Centers</td>
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<td>Ratios for Facilities Serving Children with Special Health Care Needs and Disabilities</td>
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<td>Ratios and Supervision During Transportation</td>
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<td>Ratios and Supervision for Swimming, Wading, and Water Play</td>
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<td>Qualifications of Lead Teachers and Teachers</td>
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<td>First Aid and CPR Training for Staff</td>
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#### Chapter 2 - Program Activities for Healthy Development

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### Chapter 3 - Health Promotion and Protection

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<td>Playing Outdoors</td>
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<td>5.143/5.146</td>
<td>Safe Sleep Practices and SIDS Risk Reduction</td>
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**Chapter 9 - Licensing and Community Action**

| 9.014     | 10.4.2.1 | Frequency of Inspections for Child Care Centers, Large Family Child Care Homes, and Small Family Child Care Homes |
| 9.018     | 10.4.2.1 | Frequency of Inspections for Child Care Centers, Large Family Child Care Homes, and Small Family Child Care Homes |

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| New       | 3.1.3.1 | Active Opportunities for Physical Activity |
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NATIONAL EARLY CHILDHOOD PROGRAM ACCREDITATION

NECPA Standards Reference
Introduction to NECPA Standards

This publication defines the quality core standards of the National Early Childhood Program Accreditation system (NECPA) and should be used as a guide and resource by the field and by programs seeking NECPA accreditation. The NECPA system continues to be based upon a weighted system approach. The system also allows for narrative input from the NECPA Verifier and program Director. This input ensures each program is assessed based on a complete understanding, including potentially mitigating factors that could impact accreditation.

NECPA standards encompass the whole child by assessing relationships between the child and teacher, program and center relationships with families, and program community relationships. Our focus is to ensure that each child is supported and encouraged by all the people and systems that are in their environment. The standards listed in this publication are the results of the past 30 years of research in the field of early care and education. These sources of information represent the current, best practices in the field. They include the following:

- The American Public Health Association/American Academy of Pediatrics National Health and Safety Performance Standards (APHA/AAP)
- The National Academy of Science, Committee on Family and Work Policies
- The U.S. Consumer Product Safety Commission (CPSC)
- ASTM International (American Society for Testing and Materials)

NECPA continues to be committed to high research quality of early childhood education. Between 2014 and 2017, NECPA undertook an extensive review of the existing standards. NECPA reviewed each standard, ensuring all indicators are based on current research and field recommendations. This exhaustive analysis ensures that programs who voluntarily participate in NECPA accreditation are offering children and families the highest quality of care. This review also included a voluntary pilot study to assess both the reliability and validity of the standards and self-assessment tool. This was done to ensure the standards are readily translatable into the real world, as well as ensuring consistency of verification.

The National Early Childhood Program Accreditation Commission continues to be a forerunner in setting high quality standards for child care programs across the United States and Internationally. This version of the NECPA standards is based upon the most recent knowledge and research on early childhood education and child brain development. These standards focus on the importance of quality child care curriculum, particularly that which focuses on the social emotional education, as well as that of health and nutrition.

Some programs may be subject to additional standards based upon State QRIS requirements. If your program is in one of the following states, please reference the corresponding ‘State Standards Section:’ Colorado and Ohio.

A full guide to NECPA Standards is available for purchase online at www.necpa.net.
The NECPA Standards Reference is divided into 14 chapters which encompass all 219 numbered standards. For ease of review, the NECPA Standards are organized into a table.

The table is divided into three (3) columns:

- **Column 1** identifies the NECPA Standard Number.
- **Column 2** identifies the required criteria to meet the standard.
- **Column 3** identifies the Self Assessment Instrument Item that is used to verify a particular standard.

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<td>10.10</td>
<td>A playground inspection log must be maintained at all times to reflect daily playground inspections.</td>
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Programs must employ qualified teachers for direct work with children in a progression of roles such as those listed below:

- Director/Administrator
- Lead Teacher/Teacher
- Assistant Teacher
- Teacher Aide

### Chapter 1: Director, Teacher, and Staff Qualifications and Development

#### Qualifications of Directors/Administrators

The Director or Administrator of a program must have the following qualifications:

- Must be at least 21 years old

AND meet ONE of the following for education and experience:

- Hold a bachelor’s degree in early childhood education, school-age care, child development, social work, nursing, sociology, psychology, human development and family studies, or another child-related field;

- Hold an associate’s degree in early childhood education or an above noted field and at least two years’ experience as a teacher in the age group(s) served;

- Hold a Certified Childcare Professional® (CCP) or Child Development Associate™ (CDA) or an approved higher-quality, comparable credential approved by the state and at least three years of experience as a teacher in the age group(s) served.

AND must have ONE of the following:

- The National Administrator Credential® (NAC)® or an equivalent approved credential;

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<td>1.1</td>
<td>Qualifications of Directors/Administrators</td>
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<td>OR</td>
<td>• A course in business administration;</td>
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<td>OR</td>
<td>• At least one-year experience as the administrator of an early childhood program.</td>
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<td>AND must have ALL of the following:</td>
<td>• At least 30 clock hours of job-related continuing education in the first year of employment and at least 24 clock hours of continuing education based on individual competency needs each year thereafter;</td>
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<td>AND</td>
<td>• Documented leadership training, if not a holder of The NAC®;*</td>
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<td>AND</td>
<td>• A valid certificate in both basic and infant/child first aid and CPR.</td>
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<td>*Please Note: Leadership training may be provided in-house or through an outside agency and must include topics such as delegation, communication, teamwork/team building, coaching, conflict management, and motivation. Evidence of this standard is a certificate and/or agenda that includes/outlines the training topics.</td>
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### Qualifications of Lead Teachers/Teachers

Each Lead Teacher/Teacher at the program must have the following qualifications:

- Must be at least 21 years old

AND meet ONE of the following for education and experience:

- Hold a bachelor’s degree in early childhood education, school-age care, elementary education, child development, social work, nursing, sociology, psychology, human development and family studies, or another child-related field;

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<td><strong>OR</strong></td>
<td>Hold an associate’s degree in early childhood education or an above noted field and at least one year of experience under direct supervision;*</td>
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<td><strong>OR</strong></td>
<td>Hold a Certified Childcare Professional® (CCP) or Child Development Associate™ (CDA) or an approved higher-quality, comparable credential approved by the state and two years of experience under qualified supervision.*</td>
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*Please Note: If the Lead Teacher/Teacher does not have a bachelor’s degree in one of the approved fields, they must meet the current requirements based upon the NECPA Timeline for Educational Qualifications as found in Resource Section 2.

AND must have ALL of the following:

- At least 30 clock hours of job-related continuing education in the first year of employment and at least 24 clock hours of continuing education based on individual competency needs each year thereafter;  
  
  AND

- Documented leadership training if in a supervisory role;  
  
  AND

- A valid certificate in basic and infant/child first aid and CPR.

### 1.3 Qualifications of Assistant Teachers

Assistant Teachers must have the following qualifications:

- Must be at least 18 years of age;  
  
  AND

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<td></td>
<td>• Have a high school diploma or general education certificate;</td>
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<td><strong>AND AT LEAST 33% of assistant teachers must meet ONE of the following for education and experience:</strong></td>
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<td>• Have six credits in early childhood education or early childhood development and six months experience serving the children of the age group(s) in care;</td>
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<td><strong>OR</strong></td>
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<td></td>
<td>• Have three credits in early childhood education or early childhood development and one year experience serving the children of the age group(s) in care;</td>
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<td><strong>OR</strong></td>
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<td></td>
<td>• Hold a Certified Childcare Professional® (CCP) or Child Development Associate (CDA) or an approved high-quality, comparable credential approved by the state, and one year experience serving the children of the age group(s) in care;</td>
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<td><strong>AND must have ALL of the following:</strong></td>
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<td>• At least 30 clock hours of job-related continuing education in the first year of employment and at least 24 clock hours of continuing education based on individual competency needs each year thereafter;</td>
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<td></td>
<td>• A valid certificate in basic and infant/child first aid and CPR.</td>
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<td>1.4</td>
<td>Assistant Teachers may be counted in the child:staff ratio and supervise children independently, but must work under the guidance of a Lead Teacher/Teacher.</td>
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<td><strong>Qualifications of Teacher Aides</strong></td>
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<td>All Teacher Aides must have the following qualifications:</td>
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<td>• Must be at least 18 years of age;</td>
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<td><strong>AND</strong></td>
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<td>• At least 30 clock hours of job-related continuing education in the first year of employment and at least 24 clock hours of continuing education based on individual competency needs each year thereafter.</td>
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<td>1.6</td>
<td>Teacher Aides may be counted in the child:staff ratio, but never left alone with children.</td>
<td>A-15</td>
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<td>1.7</td>
<td><strong>Qualifications of Substitute Teachers</strong> Substitute Teachers are defined as teachers hired for one day or for an extended period of time, who work under direct supervision of a permanent qualified teacher. Substitute Teachers must be at least age 18 years of age and meet the same requirements as an Assistant Teacher or higher.</td>
<td>A-16</td>
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<td>1.8</td>
<td>Substitute Teachers must receive the same screening that all other staff has received.</td>
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| 1.9 | Substitute Teachers must be given an orientation to the program and policies, that at a minimum covers to follow topics:  
A) Names and developmental needs of the children they are responsible for;  
B) Routines and transitions;  
C) Acceptable methods of behavior management/discipline;  
D) Meal patterns and food handling policies;  
E) General and emergency health and safety procedures;  
F) Handwashing procedures;  
G) Diapering procedures;  
H) Injury prevention and safety. | A-18 |
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| 1.10 | Substitute Teachers who are regularly scheduled to work at the program for an extended period of time must complete at least 30 clock hours of job-related continuing education in the first year of employment and at least 24 clock hours of continuing education based on individual competency needs each year thereafter.  
*Please Note: For NECPA purposes, one college credit equals 45 clock hours.*                                                                                                                                             | A-24 |
| 1.11 | **Volunteers**  
Volunteers (parents, interns and high school students, etc.), must be at least 16 years old and must complete the same program orientation as Substitute Teachers. Volunteers must work under the supervision of a Lead Teacher and are not counted in the child:staff ratio.                                                                                   | A-17 |
| 1.12 | **Supportive Staff**  
All supportive staff (cooks, bus drivers, administrators, etc.), must have documented training in the developmental characteristics of the children in care, mandated child abuse and neglect reporting, and the behavioral management philosophy of the program.  
*Please Note: This training may be completed during the orientation process.*                                                                                                                                                                    | A-26 |
| 1.13 | **Job Descriptions**  
The program must have a written job description for ALL staff positions.  
*Please Note: This may include the Director, Assistant Director, Lead Teacher, Assistant Teacher, Aide, Bus Driver, Cook, etc.*                                                                                                           | A-19 |
| 1.14 | **New Hire Background Checks and Procedure**  
In hiring new employees, the director must check the applicant’s references and verify past employment. An applicant is not considered an employee until the director/administrator assesses his or her mental and physical health, their ability to work effectively with young children, and verifies that the applicant does not have a criminal background which would preclude their work with children. Additionally, all staff members must review and sign a                                                                 | A-20 |
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<th>NECPA Standard</th>
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<tbody>
<tr>
<td></td>
<td>statement of agreement to the discipline/behavior management policy, which specifically identifies the consequences for not adhering to these policies.</td>
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<tr>
<td>1.15</td>
<td><strong>Initial Orientation of All Staff</strong>&lt;br&gt;The program provides staff with a complete orientation to the program upon completion of the hiring process and prior to assuming responsibilities. Orientation methods for new employees may include but is not limited to:</td>
<td>A-21</td>
</tr>
</tbody>
</table>
|     | A) Reviewing all policies and procedures, including the staff and parent handbooks and/or orientation manual;  
|     | B) Observing the classroom assigned;  
|     | C) Meeting children and coworkers;  
|     | D) Participating in a supervisory observation, so the Director may assess the new teacher’s mental and physical ability to work effectively with young children;  
<p>|     | E) Participating in “in-service training”. |       |
| 1.16 | <strong>Staff Handbook</strong>&lt;br&gt;The program has a staff handbook which is developed using staff input. | A-22  |
| 1.17 | The staff handbook must be reviewed and updated (if necessary based upon the review) annually. | A-23  |
| 1.18 | <strong>Continuing Education</strong>&lt;br&gt;Directors, teachers and all staff working directly with children must have at least 30 clock hours of job related, continuing education in the first year of employment and 24 clock hours of continuing education based on individual competency needs each subsequent year.&lt;br&gt;&lt;br&gt;<em>Please Note:</em> For NECPA purposes, one college credit equals 45 clock hours. | A-24  |</p>
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<tbody>
<tr>
<td>1.19</td>
<td>The program must conduct an annual needs assessment to identify areas of training needs and create professional development plans for staff.</td>
<td>A-27</td>
</tr>
<tr>
<td>1.20</td>
<td>The results of formal classroom observations are used to create individual professional development plans.</td>
<td>A-28</td>
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</tbody>
</table>
| 1.21 | The following areas of training are made available to all teachers:  
   A) Knowledge of typical and atypical physical, cognitive, and social-emotional child growth and development;  
   B) Designing and implementing developmentally appropriate lesson plans and group activities;  
   C) Discipline and behavioral management strategies, including positive guidance techniques;  
   D) Mandated child abuse and neglect identification and reporting;  
   E) Appropriate care of infants, including shaken baby syndrome, safe sleep practices and conditions;  
   F) First aid and CPR (including infant/child);  
   G) Health practices and promotion, including: infectious disease control and prevention, proper handwashing, daily health checks, poison safety, knowing the signs and symptoms of childhood illnesses, and standard precautions;  
   H) Appropriate classroom management, including indoor and outdoor supervision and successful transition strategies;  
   I) Cultural diversity and working with diverse families;  
   J) Proper nutrition, including age appropriate serving sizes;  
   K) Developmentally appropriate physical activities, aimed at lowering the risk of childhood obesity;  
   L) Room arrangement and classroom planning, including accidental injury prevention strategies;  
   M) Appropriate cleaning protocols for classroom environments;  
   N) Management of job-related physical and mental health concerns; | A-25  |
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<th>SAI #</th>
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</table>
| O)  | Effective child and parent/guardian communication strategies;  
|     | P) Procedures and practice of handling emergency/disasters, including but not limited to: shelter in place, threatening incidents, natural/weather related disasters, and intruder emergency situations;  
|     | Q) Knowledge of available community resources to address health and safety needs, including working with health consultants;  
|     | R) Implementation of child assessment measures in use.                                                                                           |      |
| 1.22| **Specialized Training of Staff Who Handle and Prepare Food**  
All staff who have food handling responsibilities, such as serving snack or lunch, must receive training in food protection/handling or equivalent.  
*Please Note: In-house food protection/handling training will suffice as evidence for this standard.* | A-29 |
| 1.23| The designated food service supervisor responsible for food preparation must have a certificate in food service and food safety. | A-30 |
| 1.24| **Specialized Training of Staff Who Serve Children with Special Needs**  
If the program currently serves children with developmental delays and special health care needs associated with developmental delays, there must be a teacher who has had a minimum of eight hours of training in inclusion of children with developmental delays and special health care needs. | A-31 |
| 1.25| **Teacher Retention Plan**  
The program has a teacher retention plan that includes the following: a staff development plan or formal evaluation program, including a career ladder; training opportunities (which may include coverage of dues for professional organizations and/or training courses); merit raises and/or promotions (which may include bonuses); and employee benefits (which may include employee choice of health coverage or retirement savings plan). | A-32 |
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<tr>
<th>#</th>
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<tbody>
<tr>
<td>1.26</td>
<td><strong>Staff Communication</strong>&lt;br&gt;Regular staff communication is fostered through weekly staff meetings, a staff newsletter, ample opportunity for individual staff/administrative meetings, and written memoranda, in either paper or electronic form. Weekly staff meetings are held to ensure ongoing care is provided which meets the program’s short term and long term goals for children while using a team concept.</td>
<td>A-33</td>
</tr>
<tr>
<td>1.27</td>
<td>The program has a system in place for teachers to request the materials they need for class projects/activities and teaching supplies.</td>
<td>A-35</td>
</tr>
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</table>
## Chapter 2: Supervision

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<tr>
<th>#</th>
<th>NECPA Standard</th>
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<tbody>
<tr>
<td>2.1</td>
<td><strong>General Supervision</strong></td>
<td>A-36</td>
</tr>
<tr>
<td></td>
<td>Children must be under constant supervision by qualified teachers, by both</td>
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<tr>
<td></td>
<td>sight and sound. This includes all ages of children, from infants to school-</td>
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<tr>
<td></td>
<td>aged. Children must be supervised both indoors and out, and including nap</td>
<td>B-1</td>
</tr>
<tr>
<td></td>
<td>time. <strong>Please Note:</strong> Children must be able to be seen and heard at all</td>
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<tr>
<td></td>
<td>times by the teacher. For example, if the teacher is working momentarily</td>
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<td></td>
<td>one-on-one with a child, but is able to see all of the children by slightly</td>
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<td></td>
<td>moving their position, then this standard is met.</td>
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<tr>
<td>2.2</td>
<td>To ensure that all children are safe and accounted for, children must be</td>
<td>B-2</td>
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<tr>
<td></td>
<td>counted by name to face on a regular basis. This includes any transition</td>
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<td></td>
<td>time (when going indoors to outdoors, moving from one room/area to another),</td>
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<td></td>
<td>during any field trip (including walks), when leaving vehicles (both on</td>
<td>B-3</td>
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<td></td>
<td>field trips and during regular transportation routes), and during emergency</td>
<td></td>
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<td></td>
<td>evacuations.</td>
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<tr>
<td>2.3</td>
<td>Teachers must know and be able to accurately state how many children are in</td>
<td>B-4</td>
</tr>
<tr>
<td></td>
<td>their care at any given time.</td>
<td></td>
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<tr>
<td>2.4</td>
<td><strong>Child:Staff Ratios</strong></td>
<td>B-5</td>
</tr>
<tr>
<td></td>
<td>Age appropriate child:staff ratios must always be met during all hours of</td>
<td></td>
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<tr>
<td></td>
<td>operation, both indoors and outdoors. This includes any field trips or off</td>
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</tr>
<tr>
<td></td>
<td>site activities.</td>
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<td></td>
<td>Accepted practice in the early childhood care and education field today is</td>
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<tr>
<td></td>
<td>to maintain the following child:staff ratios during all hours of operation</td>
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<tr>
<td></td>
<td>including evening and overnight care, with the exception of nap and rest</td>
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<td></td>
<td>periods:</td>
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<td><img src="image" alt="Table: Child:Staff Ratios" /></td>
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<thead>
<tr>
<th>Age Group</th>
<th>Age Range</th>
<th>Child:Staff Ratio</th>
<th>Max Group Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Infants</td>
<td>Birth to 14 months</td>
<td>3/4:1</td>
<td>6/8</td>
</tr>
<tr>
<td>Toddlers</td>
<td>15 months to 23 months</td>
<td>4/6:1</td>
<td>8/12</td>
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<tr>
<td></td>
<td><strong>Twos</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>24 months to 35 months</td>
<td>6:1</td>
<td>12/18</td>
</tr>
<tr>
<td></td>
<td><strong>Pre-School/Three/Fours</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>3 years to 4 years</td>
<td>7/8:1</td>
<td>14/16</td>
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<tr>
<td></td>
<td><strong>Pre-Kindergarten</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>4 years to 5 years</td>
<td>9/10:1</td>
<td>18/20</td>
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<tr>
<td></td>
<td><strong>School-Age</strong></td>
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<td></td>
<td>5 years to 12 years</td>
<td>12:1</td>
<td>24</td>
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*Please Note: NECPA will defer to state ratios only if teacher to child interactions are of high quality. This will be observed, verified and reviewed through NECPA Standards regarding teacher to child interactions.

When infants and toddlers are in a mixed age group, the child:staff ratio and group size for infants and toddlers must be maintained. The ratios do not include personnel who have other responsibilities that they must carry out simultaneously while watching children, such as cooks, maintenance workers, or bus drivers. When transporting children, child:staff ratios must be maintained. Bus drivers may not be used for the purposes of meeting ratio. No person under the age of 18 will be considered for the purposes of determining child:staff ratios.

2.5 The program must have a plan/policy for maintaining required child:staff ratio at all times.  
*Please Note: This may include a procedure for calling-in a staff member early or requiring the Director or Assistant Director to join the classroom if attendance is higher than anticipated. A-37

2.6 There must also be a documented prevention plan in place that states, at any given time, (even during times of low enrollment and/or attendance), there must be two staff members, (which may include the Director), present at the program during operational hours. A-38

2.7 Each age group must have an assigned Lead Teacher/Teacher, including school-age. At all times of operation when children are in care, the program must have at least one teacher who meets the Lead Teacher/Teacher requirements on site, with the exception of nap and rest periods for overnight care. A-39
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<thead>
<tr>
<th>#</th>
<th>NECPA Standard</th>
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<tbody>
<tr>
<td>2.8</td>
<td><strong>Daily Attendance Records of Children</strong></td>
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</tr>
<tr>
<td></td>
<td>Programs are required to have policies and maintain</td>
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<td>records of attendance for all the children in care.</td>
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<td>At the time of enrollment, parents/guardians must</td>
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<td>provide contact information, (for example email</td>
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<td>address, cell and work phone numbers), to help</td>
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<td>ensure there is always a method of contacting the</td>
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<td></td>
<td>parent/guardian. It should be stressed to</td>
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<td>parents/guardians, that this information must</td>
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<td>always be current. A printed roster of all</td>
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<td></td>
<td>children currently enrolled must be accessible and</td>
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<td></td>
<td>current in case of an emergency that requires</td>
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<td></td>
<td>evacuation. The program must maintain a daily</td>
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<td></td>
<td>attendance log that identifies the time of arrival</td>
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<tr>
<td></td>
<td>and departure for each child.</td>
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<tr>
<td>2.9</td>
<td><strong>Pick-Up and Drop-Off Procedures</strong></td>
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<td></td>
<td>The program must have an established procedure for</td>
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<td></td>
<td>verifying who is authorized to pick up a child from</td>
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<td></td>
<td>care. Written authorization must be available in the</td>
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<td>child’s file and the teacher or the director/</td>
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<td>administrator must verify the identity of each</td>
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<td></td>
<td>person picking up a child from care. The program</td>
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<td></td>
<td>ensures that any staff member who may be</td>
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<td>responsible for verifying the identity of an</td>
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<td></td>
<td>individual picking up a child is trained on what</td>
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<td>to do in the case of having to deny the release of</td>
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<tr>
<td></td>
<td>a child.</td>
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<tr>
<td>2.10</td>
<td><strong>Active and Positive Supervision</strong></td>
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<tr>
<td></td>
<td>All teachers must practice active and positive</td>
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<td></td>
<td>supervision, both indoors and outdoors. Teachers</td>
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<td></td>
<td>must:</td>
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<tr>
<td></td>
<td>A) Be aware of children’s activities at all times</td>
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<td></td>
<td>by scanning play activities, circulating around the</td>
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<td></td>
<td>area, and standing in strategic positions;</td>
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<td></td>
<td>B) Monitor children’s behavior to help ensure</td>
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<td></td>
<td>children’s safety, and be aware of and scan for</td>
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<td></td>
<td>potential safety hazards;</td>
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<td></td>
<td>C) Establish clear and simple safety rules and</td>
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<tr>
<td></td>
<td>teaching children how to use playground equipment</td>
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<td></td>
<td>appropriately and safely;</td>
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<td></td>
<td>D) Have knowledge of the skills and abilities of</td>
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</tr>
<tr>
<td></td>
<td>the children in care.</td>
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### Chapter 3: Behavior Management

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<tr>
<th>#</th>
<th>NECPA Standard</th>
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<tbody>
<tr>
<td>3.1</td>
<td><strong>Behavioral Management Policies</strong></td>
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<td></td>
<td>The program must have clear, written, behavioral management policies in place. These policies specify the program’s behavioral management philosophy, including responses to individual behaviors. Behavioral management policies clarify the program’s response to specific behaviors, both prevention and response oriented. These policies must be explained to parents/guardians at the time of enrollment and be defined for children in an age appropriate manner.</td>
<td>A-42</td>
</tr>
<tr>
<td>3.2</td>
<td><strong>Behavior Management Practices</strong></td>
<td></td>
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<td></td>
<td>Discipline is seen as providing guidance to the child rather than punishment. Teachers must have knowledge of age appropriate behavior management techniques including positive guidance, redirection, and providing concise limits to help children develop self-control.</td>
<td>B-7</td>
</tr>
<tr>
<td>3.3</td>
<td>These practices are clear, consistent and understandable to the child. Anytime a teacher redirects a child's behavior, they provide the child with a brief explanation of limits and rationale.</td>
<td>B-8</td>
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<tr>
<td>3.4</td>
<td>The teacher assists the child in learning socially acceptable behavior, by focusing on the positive rather than the negative to teach a child what is safe and appropriate for them and other children.</td>
<td>B-11</td>
</tr>
<tr>
<td>3.5</td>
<td>Positive behavior is encouraged through positive reinforcement. Teachers provide sincere, descriptive encouragement and attention for children’s behaviors they would like to see again.</td>
<td>B-9</td>
</tr>
<tr>
<td>3.6</td>
<td>Teachers must intervene immediately when a child’s behavior is a threat to themselves, to others, or to property. Teachers respond quickly and calmly to prevent children from hurting each other while showing understanding of the children's needs and feelings.</td>
<td>B-10</td>
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</table>
| 3.7| Teachers address the specific behavior or situation and never label a child ‘good’ or ‘bad’.

*Please Note: This standard refers to calling/labeling a child ‘good’ or ‘bad’ for a particular behavior or action, this does not refer to praising a child’s work.*                                                                                                                                                                                                                   | B-12 |
| 3.8| **Prohibited Staff and Teacher Behaviors**

Any form of child maltreatment is prohibited. This includes: emotional abuse, including teasing, humiliating, ignoring, isolating, bullying, and harassment; the withholding or use of food, meals, or snacks; and verbal abuse, including taunting, speaking harshly, or sarcastically that is meant to demean the child in any way.

The use of corporal punishment is not tolerated in any child care program, by any staff, teacher, substitute or volunteer. Corporal punishment is defined as physical punishment that intentionally causes pain and discomfort on children in response to undesired behavior.                                                                                                                                                                                                 | A-44 |
## Chapter 4: Health Protection and Promotion

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<tr>
<td>4.1</td>
<td><strong>Health Advocacy</strong>&lt;br&gt;The program has a designated staff member(s) who is responsible for health and safety issues at the program.&lt;br&gt;This person is responsible for the day to day issues related to the health and safety of the program, serves as an additional resource for children and parents, and ensures program-level health and safety concerns are addressed/resolved.</td>
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<td>A-56</td>
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<tr>
<td>4.2</td>
<td>The program has a formal or informal relationship with a medical professional who is available as a resource regarding health and safety issues, including mental and behavioral wellness.</td>
<td>A-65</td>
</tr>
<tr>
<td>4.3</td>
<td><strong>Nutritional Planning</strong>&lt;br&gt;When planning and preparing meals and snacks, the program must ensure that the child’s daily nutritional needs will be met, keeping in mind the number of meals and snacks the child will be eating at the program and at home. This is outlined in the program’s food and nutrition service policy.</td>
<td>A-70</td>
</tr>
<tr>
<td>4.4</td>
<td>Attention is paid in teaching children proper portion size and healthy food choices. Calorie dense foods like sugary beverages, desserts and snacks should not be served. Teachers work with families to introduce new foods and promote healthy eating. The food and nutrition service policy also outlines foods brought from home.</td>
<td>A-70</td>
</tr>
<tr>
<td>4.5</td>
<td><strong>CPR and First Aid Training</strong>&lt;br&gt;To ensure the health and safety of children in care, at least 90% of the staff involved in the provision of direct care must be certified in First Aid that includes rescue breathing and first aid for choking. Written verification of CPR certification must be kept on file.</td>
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<td></td>
<td>At least one certified staff person must be in attendance at all times and in</td>
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<td></td>
<td>all places that children are in care.</td>
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<td></td>
<td><strong>Please Note:</strong> First aid training, including rescue breathing and first aid</td>
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<td>for choking, is consistent with training developed by the American Red Cross,</td>
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<tr>
<td></td>
<td>the American Heart Association, the National Safety Council for First Aid</td>
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<td>Training Institute, any state approved organization, or the equivalent of one</td>
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<td>of the four.</td>
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<td></td>
<td>The NECPA Verifier must see the actual First Aid and CPR cards/certificates</td>
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<td>issued by the trainer for each employee or a notarized copy. The original card</td>
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<td>or certificate are required as proof of verification. Photocopies of the cards</td>
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<td></td>
<td>or certificates are not acceptable proof of verification. Rosters are not</td>
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<td></td>
<td>acceptable proof of verification. Printed certificates or cards with a</td>
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<td>verifiable certificate number and/or barcode are accepted.</td>
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| 4.6 | **First Aid Kits and Emergency Supplies**                                     | B-14 |
|     | There must be a fully-stocked, readily accessible first aid kit at the program| B-15 |
|     | , in every vehicle when children are being transported, and for all field     |      |
|     | trips or any activity away from the program, including walks and off-site     |      |
|     | outdoor play. This kit is stored in a designated location that is accessible|      |
|     | to staff at all times, but inaccessible to children.                          |      |

<p>| 4.7 | This first aid kit must include the following:                                | B-16 |
|     | A) Disposable nonporous gloves and sealable nonporous plastic bags for       |      |
|     | disposal of bloody materials;                                               |      |
|     | B) Sealed packages of alcohol wipes/wound cleaning solution;                 |      |
|     | C) Scissors;                                                                 |      |
|     | D) Tweezers;                                                                 |      |
|     | E) Thermometer;                                                              |      |
|     | F) Bandage tape;                                                             |      |
|     | G) Sterile gauze pads and ‘Band-Aids’;                                       |      |
|     | H) Flexible roller gauze;                                                    |      |
|     | I) Triangular bandage or arm-sling;                                          |      |
|     | J) Safety pins;                                                              |      |
|     | K) Eye dressing;                                                             |      |
|     | L) Pen/pencil and notepad;                                                   |      |
|     | M) Cold pack;                                                                |      |</p>
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<tr>
<td>N</td>
<td>Current American Academy of Pediatrics or American Red Cross standard first aid text or equivalent first aid guide;</td>
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<td>O</td>
<td>Cell phone or coins for use at a pay phone;*</td>
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<td>P</td>
<td>Insect sting preparation (if allowed by state regulations);</td>
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<tr>
<td>Q</td>
<td>Poison control center telephone number;</td>
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<td>R</td>
<td>Small plastic or metal splints, or rolled magazine, or newspaper;</td>
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<td>S</td>
<td>Soap (not bar soap);</td>
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<td>T</td>
<td>Emergency numbers;</td>
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<td>U</td>
<td>Flashlight;</td>
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<tr>
<td>V</td>
<td>Whistle.</td>
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**Please Note:** If your state licensing/regulations prohibit any of the above, please include labeled documentation for verification item B-16. *Item O) A cell phone does not have to be kept in the first aid kit, however it must always be accessible for emergency use.*

**Handwashing**

Teachers instruct children on hand washing by breaking the process into meaningful steps. The handwashing procedure must be posted at each handwashing sink.

Staff and children wash their hands at the following times:

- A) Before and after any food service activity (including preparation, handling, setting the table, or serving);
- B) Before and after eating meals or snacks;
- C) Before toileting or changing diapers/pull-ups (for staff ONLY);
- D) After toileting or changing diapers/pull-ups (for staff AND children);
- E) After assisting a child with toilet use or toileting accidents;
- F) After having any contact with bodily fluids (including mucous);
- G) Upon arrival to the classroom, including coming in from outdoors;
- H) After handling any animals (including fish, insects and reptiles).

*Please Note: All staff, children and volunteers must use a state approved handwashing procedure or the following handwashing procedure:
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<tr>
<td>4.9</td>
<td>There must be a trash receptacle readily accessible for each handwashing sink.</td>
<td>B-20</td>
</tr>
</tbody>
</table>
| 4.10 | **Toileting Area**  
Children must be able to open toilet doors from inside and teachers must be able to open toilet doors from the outside so they may assist children when necessary.                                                                                                                                                                      | B-21  |
|     |                                                                                                                                                                                                                                                                                                                                                | B-22  |
| 4.11 | A closable, foot-pedal operated, or motor sensor operated, plastic-lined trash receptacle must be provided in the toileting area if toilet training is occurring for the disposal of diapers and/or pull-ups.                                                                                                                                                  | B-20  |
| 4.12 | **Medications**  
The administration of medicines at the program is limited to:  
- Prescription or nonprescription medication (including over-the-counter cold medicines or pain reliever) with written orders from a prescribing health care professional and written permission from a parent/guardian.  
- Medication is dated and kept in the original container or labeled by a pharmacist with the child’s first and last name. The written orders or label specifies the date the prescription was filled, the name of the health care professional, and the dosage form and strength. | A-58  |
<p>|     |                                                                                                                                                                                                                                                                                                                                                | A-59  |</p>
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<td>provider who wrote the order, the medication’s expiration date, and specific, legible instructions for administration, storage and information on any possible side effects. Only designated persons, who are certified through Medication Administration Training (MAT) or a state approved standardized training provided by a licensed health professional, are authorized to administer medications. <strong>Please Note:</strong> Non-prescription sunscreen and insect repellent must have parental/guardian consent, but do not require instructions from a health professional.</td>
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<tr>
<td>4.13</td>
<td>A log is kept and filed of all medication administered. The medication log must contain the following: A) Child's first and last name; B) Expiration date of medication; C) Name and strength of the medication; D) Age appropriate dosage; E) The manufacturer’s instructions or prescription label with specific, legible instructions for administration; F) Storage and disposal; G) If prescription, the name of the health care provider who wrote the prescription; H) Time to be administered and date; I) Parent/guardian(s) signature; J) Person who administered the medication, the dosage/amount and time administered.</td>
<td>A-60</td>
</tr>
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**Child Abuse and Neglect Policy**

The program must have a written policy for reporting child abuse and neglect. When child abuse, neglect or exploitation is suspected reports are made to the appropriate jurisdiction, such as the Department of Social Services, Child Protective Services Agency, or police.

All staff must be made aware that they are mandated reporters and are informed of their responsibilities in reporting child abuse and neglect. All teachers, staff, and volunteers at the program are given clear information about reporting child abuse. This includes the state child abuse reporting regulations, instructions on reporting, the chain of command, and a statement of reassurance that the person who reports abuse will not be fired merely because they made a report.
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<td></td>
<td>When a child is enrolled in the program, the child’s parent/guardian is notified of the program’s legal responsibility to report any suspected incidence of child abuse.</td>
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<td>4.15</td>
<td><strong>Health Protection and Promotion Policy</strong>&lt;br&gt;The program must have policies in writing on the following:&lt;br&gt;A) Clear instructions for handling emergency and critical care situations;&lt;br&gt;B) Illness inclusion and exclusion policies for both children and staff, that addresses reentry into the program after illness;&lt;br&gt;C) Guidelines that address seasonal and pandemic flu policies, including reporting designated infectious diseases to the CDC;&lt;br&gt;D) An explanation of common child care illnesses that includes a plan to handle sick children, as well as safety measures to protect the health of other children and staff;&lt;br&gt;E) Prevention protocol for communicable diseases.</td>
<td>A-45 A-63</td>
</tr>
<tr>
<td>4.16</td>
<td><strong>Illness/Injury</strong>&lt;br&gt;In order to minimize the spread of illness, there must be a separate area to care for children who are too ill to receive care in the regular group until a parent or guardian arrives to pick up the ill child. This separate area could be an administrative office or an area of the classroom, away from other children, but always within sight and sound supervision.</td>
<td>A-63</td>
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<tr>
<td>4.17</td>
<td>Parents must be notified as soon as possible when a child’s behavior indicates possible illness.</td>
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<tr>
<td>4.18</td>
<td>The program maintains a file or log, tracking all illnesses and/or communicable diseases. This illness log must include:&lt;br&gt;A) The date, time, and name of the person impacted;&lt;br&gt;B) Identification of the symptoms;&lt;br&gt;C) Detailed explanation of how the teacher responded to the symptoms;&lt;br&gt;D) Person contacted, including a parent/guardian, emergency contact, nurse, or local health department (if warranted);&lt;br&gt;E) The name of the person who filled out the log.</td>
<td>A-61 A-62</td>
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<td>4.19</td>
<td>The program has a system for daily health screenings along with a record of the teachers’ concerns. The daily screenings include the following:</td>
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<tr>
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<td>A) Changes in usual behavior or appearance;</td>
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<td>B) Taking the child’s temperature with a thermometer, if there are changes in the child’s behavior or appearance,</td>
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<td>C) Skin rashes, itchy skin, or lice/nits (during a lice outbreak);</td>
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<td>D) Complaints of pain or not feeling well;</td>
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<td></td>
<td>E) Other signs or symptoms of illness (including drainage from eyes, vomiting, and diarrhea);</td>
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<td>F) Reported illness or injury to child since last day of attendance.</td>
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<td>4.20</td>
<td>The program maintains a file or log, tracking all injuries that occur at the facility. This injury log must include:</td>
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<td></td>
<td>A) Name, gender, and age of the injured person;</td>
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<td></td>
<td>B) Description of the injury;</td>
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<td>C) Date and time of injury;</td>
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<td>D) Location where injury took place;</td>
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<td>E) Body part(s) involved;</td>
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<td>F) Description of any consumer product involved;</td>
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<td>G) Name of the staff member responsible for supervising the child at the time of the injury;</td>
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<td>H) Actions taken on behalf of the injured following the injury;</td>
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<td></td>
<td>I) Name of person who completed the report;</td>
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<td></td>
<td>J) Name and address of the facility.</td>
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<tr>
<td>4.21</td>
<td><strong>Health and Developmental Screenings and Assessments</strong></td>
<td>A-47</td>
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<td></td>
<td>The program must have a policy and procedure in place to ensure that within 90 days of enrollment children (excluding school-age) are referred to</td>
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<td>any needed health related screenings, including, vision, speech and language, hearing, and special health care needs. Health related screenings may be done</td>
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<td></td>
<td>at the program or through an outside health organization.</td>
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## Chapter 5: Physical Environment, Equipment, Prohibited Supplies and Transportation

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<tr>
<td>5.1</td>
<td><strong>Physical Environment</strong></td>
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<td></td>
<td>The overall appearance of the program both inside and outside must be clean,</td>
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<td>free from clutter, well-maintained, odor-free, and welcoming. In order to</td>
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<td>best protect children, there must be an entry area to the facility for</td>
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<td>parents, children, and guests that is separate from play areas.</td>
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<td>Each room in the program must have adequate lighting and ventilation.</td>
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<td>5.2</td>
<td>Facilities, equipment and toys (both indoor and out), are free of chipping</td>
<td>B-23</td>
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<td></td>
<td>or peeling paint. Indoor and outdoor play equipment is free of pinch or crush</td>
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<td></td>
<td>points. Broken and/or inoperable toys or equipment are removed until repaired</td>
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<td></td>
<td>or replaced.</td>
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<td>5.3</td>
<td>In order to prevent food contamination, food preparation and feeding activities</td>
<td>B-24</td>
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<tr>
<td></td>
<td>must be separated from diapering and toileting areas.</td>
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<td></td>
<td><strong>Please Note:</strong> <em>If only one sink is available in a classroom then it may be</em></td>
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<td></td>
<td><em>used for both handwashing and food preparation as long as the sink is</em></td>
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<td></td>
<td><em>sanitized before each instance of food preparation. This procedure must be</em></td>
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<td></td>
<td><em>posted at the sink.</em></td>
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<td>5.4</td>
<td>Equipment is child-sized and adjusted for the developmental ages of the</td>
<td>B-25</td>
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<td></td>
<td>children.</td>
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<td>5.5</td>
<td>Each classroom or area must have storage space for staff materials and</td>
<td>B-26</td>
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<td>classroom supplies. Staff member’s personal items, hot beverages, and</td>
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<td>medication are limited to a designated area which is inaccessible to</td>
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<td></td>
<td>children.</td>
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<td>5.6</td>
<td><strong>Indoor Gross Motor Area and Equipment</strong></td>
<td>B-28</td>
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|   | The program provides space for gross motor play/development inside the facility on days when outdoor experiences are inappropriate.  
*Please Note:* This standard does not require a separate specific indoor gross motor area but requires that gross motor play/development is made available to children in the classroom on days when outdoor play is unavailable. |      |
| 5.7 | If the program provides indoor climbing equipment that is over 18 inches high, it must be placed on impact-absorbing mats* which extend a minimum of 6 feet** beyond the perimeter of the equipment.  
*Please Note:* NECPA defers to the Consumer Product Safety Commission (CPSC) regarding the required fall-zone and surfacing for indoor play equipment. Evidence of meeting this standard may be the manufacturer’s guidelines on the surfacing’s installation and approved use. Include a hard copy of this in your labeled documentation file/box for item B-29.  
**Please Note:** If, and only if, state regulations/licensing permits the surface material to extend a minimum of 4 feet beyond the perimeter of the equipment, answer No to Item B and include a hard copy of the specific state regulation in your labeled documentation box/file for Item B-29. |      |
| 5.8 | **Cleaning Responsibilities and Schedule**  
The program must have a planned and documented cleaning schedule that includes daily, weekly, and more extended cleaning duties. Major cleaning projects* must be anticipated and budgeted accordingly.  
*Please Note:* A documented list of scheduled major cleaning may be used as evidence for Item A-76.                                                                 | A-75  |
| 5.9 | Teachers’ responsibilities should include cleaning spills and accidents when necessary to maintain a clean and healthy environment. This includes maintaining the general classroom area, bathrooms and dining areas. Mouthed toys are put aside and cleaned before being made available to other children. | A-73  |
| 5.10 | The following weekly cleaning tasks are conducted to ensure a healthy and safe environment between major cleanings:  
A) Cots, mats, and cribs are kept separate, notated for individual child’s use, and cleaned and sanitized; | A-74  |
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<tr>
<td>5.11</td>
<td><strong>Sheets and blankets</strong>&lt;br&gt;B) Sheets and blankets are kept separate, notated for individual child’s use, and washed;&lt;br&gt;C) Non-mouthed toys are cleaned and sanitized.</td>
<td>A-77</td>
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<td></td>
<td>The program must have a system in place to order needed repairs or replacement of equipment in a timely fashion.</td>
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<td>5.12</td>
<td><strong>Toxic Substances</strong>&lt;br&gt;Any potentially toxic materials must be stored in labeled containers and used only in accordance with the manufacturer’s directions and specific purpose.&lt;br&gt;Cleaning, sanitizing and disinfecting products are not used in close proximity to children, and adequate ventilation is maintained during any cleaning, sanitizing or disinfecting procedure to prevent children and teachers from inhaling potentially toxic fumes. When not in actual use, such materials must be kept in a place inaccessible to children and separate from stored medications and food.</td>
<td>B-30</td>
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<tr>
<td>5.13</td>
<td>All arts and crafts materials used in the program must be nontoxic. To prevent accidental poisoning, children and staff are not be permitted to eat or drink while using arts and crafts materials. Arts and crafts are used in well-ventilated areas.</td>
<td>A-72</td>
</tr>
<tr>
<td>5.14</td>
<td>All plants accessible to children must be labeled and identified by name with the local poison control center to determine safe use. Potentially harmful plants must always be inaccessible to children.</td>
<td>B-31</td>
</tr>
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<td>5.15</td>
<td>No paint containing lead in excess of 0.06 percent is used when surfaces are repaired or when any new surfaces accessible to children are painted. Proof of lead levels of paint are required for buildings made before 1978.</td>
<td>B-23</td>
</tr>
<tr>
<td>5.16</td>
<td><strong>Transportation and Bus Driver Qualifications</strong>&lt;br&gt;Programs that provide daily or regular transportation for children must have the following in place:&lt;br&gt;A) Regularly scheduled maintenance of the vehicle(s) and a maintenance log for each vehicle;</td>
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|   | B) A policy and routine to protect children from being forgotten in vehicles, or being left unattended and unsupervised, both inside and outside of vehicles during times of entering or departing;  
  C) A protocol that includes a final bus walkthrough by a lead teacher, bus driver, or bus monitor;  
  D) Current liability and vehicle insurance;  
  E) Transportation logs;  
  F) The use of age appropriate restraint systems for all children, *(if available or required by the state)*;  
  G) Adequate supervision for children being transported;  
  H) Emergency information for each child available on each vehicle;  
  I) A first aid kit properly equipped for each vehicle. |       |
| 5.17 | Any driver who transports children for a child care program must be at least 21 years of age and meet the following criteria:  
  A) Possess a valid driver’s license OR commercial license (if required by the state) that authorizes them to operate the type of vehicle being driven;  
  B) Has evidence of a safe driving record for more than five years;  
  C) Has no medical condition that would compromise driving, supervision or evacuation capability and no use of alcohol or any prescription, nonprescription, or over the counter medications that may impair driving abilities;  
  D) Completed all state background checks. | A-80  |
### Chapter 6: Teacher:Child Interactions and Care

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<td>6.1</td>
<td><strong>Relationship Development</strong>&lt;br&gt;To ensure continuity of care, the program limits the number of qualified teachers who care for any one child during a normal day.</td>
<td>A-81</td>
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</tbody>
</table>
| 6.2  | **Verbal Interaction**<br>Staff greet each child and parent/guardian. Teachers address each child by name and provide children one-on-one attention as much as possible. | B-32    
|      |                                                                               | B-33    
<p>|      |                                                                               | B-34    |
| 6.3  | The teachers must be available and responsive to children, encourage them to share experiences, ideas and feelings, and listen to them with attention and respect. The interaction should be a back and forth communication where the teacher encourages and expands upon children’s verbal communication. | B-35 |
| 6.4  | Teachers speak to each child frequently, making eye contact and using clear, correct language patterns and affectionate, supportive words. | B-35    |
| 6.5  | Teachers make a concerted effort to understand what children are trying to communicate, assist them in expressing themselves and respond sensitively when children are frustrated, angry and/or afraid (i.e. when they are separating from their parents). Teachers welcome children who come for support with a reassuring and nurturing response. For children with special needs, alternative methods of communication should be used if necessary. | B-35    |
| 6.6  | Children are encouraged to express their feelings of affection, joy, delight, sadness, anger, and other emotional responses to everyday events. | B-35    |</p>
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<td>6.7</td>
<td>Teachers encourage children to feel good about their individual and group accomplishments by using positive reinforcement. They focus on the children as individuals.</td>
<td>B-35</td>
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<tr>
<td>6.8</td>
<td><strong>Interaction Relating to Meals and Snacks</strong></td>
<td>B-36</td>
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<td>A relaxed routine is established to make mealtimes pleasant.</td>
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<td>6.9</td>
<td>Teachers sit with the children, including those in high chairs, during meals while modeling appropriate behavior and using mealtime as a learning experience.</td>
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<tr>
<td>6.10</td>
<td>Teachers use mealtime as a time to encourage language and discussion, talking with children about the taste, size, color, smell and texture of foods.</td>
<td>B-38</td>
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<tr>
<td>6.11</td>
<td>Food is prepared and served in a manner that is appropriate for the developmental level of the child and which prevents cross-contamination.</td>
<td>B-39</td>
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## Chapter 7: Infant and Toddler Care

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<td>7.1</td>
<td><strong>Relationship Based Approach</strong>&lt;br&gt;Each qualified teacher has primary responsibility for, and develops deeper attachment to, an identified group of infants/toddlers. Every attempt is made to have continuity of adults who work with children, particularly infants and toddlers.&lt;br&gt;A primary teacher is assigned to each child under the age of two years. The program also limits the number of qualified teachers who interact with any one infant to no more than three teachers (not staff members) in a given day.*&lt;br&gt;*Please Note: This standard does not include staff members who relieve teachers for lunch breaks. This standard is referencing the specific team of teachers for this classroom and infant in order to ensure continuity of care. Continuity of care is evident in both policy and teacher scheduling.</td>
<td>B-40  B-41  B-56</td>
</tr>
<tr>
<td>7.2</td>
<td>Infants are allowed to establish and maintain their own eating and sleeping patterns. The teacher records each infant’s feeding, sleeping, and diapering/toileting activities daily. This information is made available to parents at the end of the day.</td>
<td>B-42</td>
</tr>
<tr>
<td>7.3</td>
<td>Infants and toddlers are encouraged to engage in social play and interaction with teachers during feeding, bathing, dressing, and other aspects of care.</td>
<td>B-58</td>
</tr>
<tr>
<td>7.4</td>
<td>Teachers provide warm and loving physical contact with infants in a variety of ways from soothing to stimulating, depending on the infant's readiness and needs.</td>
<td>B-43</td>
</tr>
<tr>
<td>7.5</td>
<td>The teacher is responsive to the young child’s initiatives to play, move, and use toys and materials.</td>
<td>B-59</td>
</tr>
<tr>
<td>7.6</td>
<td><strong>Health Promotion and Safety Equipment</strong></td>
<td>B-44</td>
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<td>7.7</td>
<td>To help maintain a healthy environment, the program requires that all persons remove their shoes, put on shoe covers, or put on slippers/booties that are only worn in that room prior to entering a play area used by non-mobile infants.</td>
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</tbody>
</table>
| 7.8 | In order to prevent food contamination, food preparation and feeding activities must be separate from diapering and toileting areas in all infant and toddler classrooms.  
  **Please Note:** If only one sink is available in a classroom then it may be used for both handwashing and food preparation as long as the sink is sanitized before each instance of food preparation. This procedure must be posted at the sink. | B-60 |
| 7.9 | Teachers working with young infants must use coverings, including a burping cloth or child’s bib, that are changed daily or more frequently if they become soiled. Each covering is specific to one infant in order to help prevent the spread of germs. | B-45 |
| 7.10| Cribs that are touching must be separated by a see-through barrier to help prevent the spread of germs.  
  **Please Note:** This barrier must not restrict direct line of sight supervision, for example, the barrier may be Plexiglas affixed to or between the cribs. | B-46 |
| 7.11| The program must have special evacuation equipment or cribs for enrolled infants.  
  **Restrictive Infant Equipment Requirements**  
  Young infants are held and carried frequently and their positions and locations changed. | B-47 |
| 7.12| The use of infant swings, exersaucers, infant seats, molded seats or any other confining equipment, if used, is limited to no longer than 15 minute time periods. Equipment is only used when infants are age and developmentally capable. | B-48 |
| 7.13| **Verbal Interaction**                                                                                                                                                                                      | B-49 |

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<td>Qualified teachers working with infants encourage babbling and the development of verbal and social skills by repeating and expanding on their limited verbal skills and by naming familiar objects, discussing routine activities and by imitating common sounds. The teacher talks to the infants describing what they are doing and what they feel, hear, touch, and see. Teachers working with infants/toddlers play interactive games, talk, read and provide access to a variety of books, and sing to the children.</td>
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<tr>
<td>7.14</td>
<td>Teachers assist toddlers in learning the names of common objects and talk about their experiences and observations as they happen or soon thereafter.</td>
<td>B-61</td>
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</table>
| 7.15 | **Diaper Changing Area/Toileting Area**  
Teachers check infants and toddlers diapers/pull-ups on a regular basis and change wet or soiled diapers/pull-ups/clothing immediately.  
Teachers use diapering and toileting as a time to talk with and relate warmly to children. | B-62  B-66 |
| 7.16 | Changing tables must consist of impervious, nonabsorbent surfaces. Tables are sturdy and the appropriate adult height. Teachers ensure that children are protected from falling during the diapering procedure.*  
A closable, foot-pedal operated, or motor sensor operated, plastic-lined trash receptacle must be provided in every diaper/pull up changing area for contaminated diapers and wipes. This receptacle must be functionally operational and require no hand contact for disposal.  
*Please Note: The use of clips/belts on the changing table is prohibited. | B-63 |
<p>| 7.17 | The program must use either disposable diapers, or a recognized diaper service, or require that parents provide a sufficient daily diaper supply.                                                                 | B-63 |</p>
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<tr>
<td>7.18</td>
<td>A chart or policy showing proper diapering procedures must be posted at each changing table and in each toilet where toilet training is occurring. Teachers follow this procedure and ensure standard precautions are practiced at all times. To prevent the spread of germs, teachers should wear disposable gloves when changing diapers. New gloves must be used with each diaper change. Changing tables must be properly cleaned then sanitized/disinfected following the manufacturer’s instructions for cleaning the nonabsorbent changing surface.</td>
<td>B-63</td>
</tr>
<tr>
<td>7.19</td>
<td>Handwashing sinks with liquid soap dispensers/bottles are provided and accessible to each changing table/toileting area. Handwashing sinks are located in the same room/area as the diaper changing table, optimally within arms-reach, to prevent the spread of contaminants and disease. One designated handwashing sink should be conveniently accessible for every two changing tables. To decrease the spread of germs, in infant and toddler classrooms, designated sinks and changing tables should be used only by the children and adults assigned to that classroom.</td>
<td>B-64</td>
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</table>
| 7.20| If the program accepts cloth diapers, the diaper must have an absorbent inner liner as well as an outer cover that is waterproof. A formal proper disposal/procedure for handling contaminated cloth diapers must be in place and conform to current state regulations and requirements. All teachers and staff who may change the cloth diapered child must be trained in the protocol. | A-82  
A-83 |
<p>| 7.21| When toddlers are ready for toilet training, the teacher: coordinates a toilet training plan with the child’s parent/guardian; ensures supplies (toilet paper, soap, and paper towels) are available to the child; monitors the bathroom to ensure appropriate toilet hygiene occurs, including flushing toilets and making sure that toilet seats and floors are clean; and ensures that proper handwashing occurs after toilet use.                                                                                                                                                                                                 | B-67 |
| 7.22| Toileting areas in infant and toddler rooms must have barriers to prevent children from entering this space unattended.                                                                                                                                                                                                                                                                                                                                                   | B-68 |</p>
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<td></td>
<td><strong>Please Note:</strong> This barrier does not have to be a permanent structure. A baby gate or modular structure is sufficient evidence for this standard.</td>
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<td>7.23</td>
<td><strong>Supervision</strong></td>
<td>B-69</td>
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<td></td>
<td>Teachers must supervise infants and toddlers by sight and sound at all times, including when children are asleep.</td>
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<td></td>
<td><strong>Please Note:</strong> Children must be able to be seen and heard at all times by the teacher. For example, if the teacher is working one-on-one with a child, but is able to see all of the children by slightly moving their position, then this standard is met.</td>
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<td>7.24</td>
<td>If there is only one teacher in the classroom, the diaper changing area must be located so the teacher is able to provide constant sight and sound supervision of all of the children entrusted to their care.</td>
<td>B-70</td>
</tr>
<tr>
<td>7.25</td>
<td>If dividers are used to separate one area from another, they must be low enough to provide for easy supervision of all infants/toddlers.</td>
<td>B-71</td>
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<tr>
<td>7.26</td>
<td><strong>SIDS Prevention</strong></td>
<td>A-84</td>
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<td></td>
<td>The program must develop and implement a written policy using current American Academy of Pediatrics’ (AAP) Guidelines that defines the safe sleeping practices to be used when infants are napping or sleeping.</td>
<td>B-51</td>
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<td></td>
<td>To minimize the risk of Sudden Infant Death Syndrome, qualified teachers do not swaddle infants and always puts infants and toddlers to sleep on their back on cribs with a flat, firm mattress. Teachers also ensure the following items are never placed in the crib; blankets, pillows/boppies, bumpers, soft toys, pacifier attachments, and jewelry.</td>
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<td><strong>Please Note:</strong> If there is a medical reason for any exceptions to the current safe sleep plan, a physician’s note must be on file and documentation of a care plan must be present in the classroom.</td>
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<tr>
<td>7.27</td>
<td>Parents are required to remove infants from their car seat upon arrival at the program, even if the child is asleep.</td>
<td>B-50</td>
</tr>
<tr>
<td>7.28</td>
<td><strong>Infant and Toddler Feeding</strong></td>
<td>B-73</td>
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<td></td>
<td>Small objects and foods which frequently cause choking must not be accessible to young children.</td>
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<td>7.29</td>
<td>Young infants are fed individually and held for bottle feedings.</td>
<td>B-52</td>
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<td>7.30</td>
<td>Infant foods are never warmed in a microwave. Bottles for infants are warmed under warm tap water or placed in a container of water that may not exceed 120 degrees Fahrenheit.</td>
<td>B-53</td>
</tr>
<tr>
<td>7.31</td>
<td>Mobile infants and toddlers are offered finger foods when developmentally appropriate. Toddlers are encouraged to feed themselves. Teachers encourage older infants and toddlers to use appropriate child-sized cups and utensils.</td>
<td>B-74</td>
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<td><strong>Support for Breastfeeding</strong></td>
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<td></td>
<td>The program supports breastfeeding by having a policy regarding breastfeeding at the facility and proper care for breast milk brought from home.</td>
<td>A-85</td>
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<td>7.32</td>
<td>The program provides accommodations for mothers who choose to breastfeed and/or pump at the program.* Teachers must receive appropriate training on the proper handling, storing, and serving of breast milk.</td>
<td>A-86</td>
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<td></td>
<td>*Please Note: This may include a designated area or the use of the staff lounge, an empty room or office, or a curtained off area with seating within the classroom.</td>
<td>B-77</td>
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<tr>
<td>7.33</td>
<td><strong>Use of Pacifiers</strong></td>
<td></td>
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<td></td>
<td>If pacifiers are used, they must be cleaned before and after each use; be free of fluid before being given to the child; closely monitored to prevent shared use; and be free from strings or attachments.</td>
<td>B-78</td>
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<tr>
<td>7.34</td>
<td><strong>Space and Activity to Support Learning of Infants and Toddlers</strong></td>
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<td></td>
<td>Infants are given ample opportunities for tummy time, and to crawl, explore, and walk as they develop, both independently and teacher supported.</td>
<td>B-54</td>
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<td>7.35</td>
<td>Infants and toddlers are also given opportunities to develop small muscles through activities and materials which they are able to grasp, drop, pull, push, throw, finger and mouth.</td>
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<td>7.36</td>
<td>Teachers foster cognitive learning by providing opportunities and materials to encourage infants/toddlers to discover how they can make things happen and to solve simple problems.</td>
<td>B-79</td>
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<tr>
<td>7.37</td>
<td>Teachers respect the toddler’s right to say “no” or not participate, understanding the normal developmental stages of young children.</td>
<td>B-80</td>
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<tr>
<td>7.38</td>
<td><strong>Encouragement of Self Help Skills in Older Infants and Toddlers</strong>&lt;br&gt;Teachers provide physical assistance, support and encouragement for mobile infants and toddlers when walking, climbing, descending stairs, and performing other gross motor movements.</td>
<td>B-81</td>
</tr>
<tr>
<td>7.39</td>
<td>Teachers working with toddlers encourage self-help skills when eating, getting dressed, using toys and equipment, and cleaning up.</td>
<td>B-82</td>
</tr>
<tr>
<td>7.40</td>
<td>Teachers encourage toddlers to follow good health practices by instructing them on how to wash their hands at the proper times and preventing the children from sharing feeding utensils, facial tissues, and other personal items.</td>
<td>B-83</td>
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# Chapter 8: Curriculum

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| 8.1 | **Program Philosophy**  
The program must have a well-articulated, written statement of its mission, philosophy, principles, and goals for children.  
This information is used to shape the program and curriculum and is included in the staff handbook, parent handbook, and orientation materials. |
|     | A-87 |
| 8.2 | **Curriculum Plans**  
The program must have a written comprehensive, coordinated, and planned curriculum based on the program’s philosophy, principles, goals for children’s development, that if applicable, aligns with state guidelines or principles.  
The curriculum plans must be based on developmentally appropriate practices and be modified based on: assessment of children’s individual needs and interests; ages of children; special needs of children; and the social, emotional, cognitive, physical and language development of individual children. Plans must also be developed with input from teachers; family needs, traditions and language; children’s progress reports; and be culturally sensitive. |
|     | A-88  
A-91 |
| 8.3 | Written curriculum plans provide a common understanding between the program, teachers, and parents/guardians.  
The daily schedule and routine are based off the curriculum plan to ensure they meet the developmentally appropriate learning goals for each child. The daily schedule allows for children to revisit experiences/concepts over time. |
|     | A-92 |
| 8.4 | **Annual Review of Curriculum**  
The curriculum plan and developmental program must be reviewed annually by administration, teachers, staff, and parents to be sure the plan is meeting the needs of every child. |
<p>|     | A-89 |</p>
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<td>8.5</td>
<td>Results of this review must be used to modify the program or curriculum plan, if necessary, which include specific, executable goals for the program.</td>
<td>A-89</td>
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<tr>
<td>8.6</td>
<td><strong>Lesson Plans</strong>&lt;br&gt;Teachers are required to develop written lesson plans for both indoor and outdoor activities and these are reviewed weekly by the director or education coordinator.</td>
<td>A-93</td>
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<tr>
<td>8.7</td>
<td><strong>Promoting Physical Activity</strong>&lt;br&gt;The program has written outdoor play policies that include: addressing the benefits of physical activity; outlining the duration of required physical activity; and specifying the clothing requirements of children.</td>
<td>A-95</td>
</tr>
<tr>
<td>8.8</td>
<td><strong>Curriculum for Children with Special Needs</strong>&lt;br&gt;Wherever possible, children with special needs must be included in all classroom activities and opportunities. The program must have a philosophy and practice of inclusion.&lt;br&gt;&lt;br&gt;<strong>Please Note:</strong> NECPA defers to the Individuals with Disabilities Education Act (IDEA) and the U.S. Department of Education’s Office for Civil Rights (OCR) to define children with special needs.</td>
<td>A-99</td>
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<tr>
<td>8.9</td>
<td>In addition, each child with special needs must have an individual program service plan and be professionally evaluated. Reviews of each child’s progress are done using a team concept. The program must have access to a referral system.</td>
<td>A-97</td>
</tr>
<tr>
<td>8.10</td>
<td><strong>Ongoing Child Assessments</strong>&lt;br&gt;Teachers must assess each child’s ongoing developmental progress with reliable and valid measures that they have been trained on. This assessment must align with the program’s curriculum goals.</td>
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<td>The tool(s) must assess and monitor children’s ongoing development (including sensory, cognitive, gross motor, fine motor, socio-emotional, and language), through observation and documentation of children’s work, play, behaviors, and interactions.</td>
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<tr>
<td>8.11</td>
<td>The program takes into account families’ needs, traditions and language when choosing, evaluating and communicating child assessments, to ensure they will best meet each child’s developmental goals. This written assessment is used in teacher/parent conferences to keep parents abreast of their child’s milestones and to plan for future learning opportunities for the child.</td>
<td>A-103</td>
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<tr>
<td>8.12</td>
<td>Parents/guardians are encouraged to participate in and share their at-home observations. This information is used to influence children’s ongoing assessments at the program. Parents are encouraged to meet with teachers as needed through formal and informal meetings.</td>
<td>A-104</td>
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## Chapter 9: Developmental Program

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| 9.1 | **Individual Classroom Layout, Arrangement of Equipment and Furnishings**  
Separate indoor areas/classrooms are provided to meet the developmental needs of different age groups enrolled at the program.  
In each area/classroom there are separate areas to provide a variety of experiences and learning opportunities. Materials with similar use are placed together to make interest areas which are developmentally appropriate. Interest areas/learning centers are organized, accessible and inviting to children. The areas are set up so that traffic patterns do not interfere with activities and children have ample space to maneuver, work and play.  
Children’s work is displayed in the appropriate activity area at children’s eye-level. Quiet and active play areas are in separate areas of the room. | B-84  
B-85  
B-86 |
| 9.2 | Furniture, equipment and any dividers used to create areas are intentionally placed to prevent unintentional injuries and are low enough to ensure proper supervision of all areas. | B-87 |
| 9.3 | The room arrangement creates a warm, nurturing, comfortable atmosphere for children by using home-type furnishings, displaying photographs of the children and their families at child’s eye level, and by providing each child with a personal storage area and personalizing/labeling each child’s nap/rest materials. | B-85  
B-88 |
| 9.4 | Room arrangement provides separate areas for children to read or engage in individualized developmentally appropriate learning activities. These areas are made comfortable with the use of soft furniture, pillows, rugs and/or carpeting. | B-89 |
| 9.5 | **Daily Schedule/Routine**  
Teachers foster the children’s sense of trust and confidence by developing a consistent daily routine which the children can rely on. Simple, consistent patterns are followed in transitioning from one activity to the next. | B-90  
B-91  
B-92 |
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<td>Routines, activities, and materials are adjusted to the mood and energy changes for groups and individual children.</td>
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<td>9.6</td>
<td>Children are encouraged to assist in maintaining their classrooms by giving them opportunities to engage in self-help activities that promote competency and mastery. The routine includes tasks for which the children themselves take responsibility, according to their ability, in order to encourage children’s sense of self-reliance.</td>
<td>B-94</td>
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<td>9.7</td>
<td><strong>Developmentally Appropriate Materials</strong></td>
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<td>The program must provide developmentally appropriate materials of sufficient quantity and variety that are readily accessible to children. These materials are used to promote children’s exploration, experimentation and discovery.</td>
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<td>9.8</td>
<td>Materials reflect diversity in gender, age, language, ability, culture and ethnicity.</td>
<td>B-96</td>
</tr>
<tr>
<td>9.9</td>
<td>Teachers ensure that toys, equipment, and other materials which are safe for older groups are not accessible to younger groups unless under close supervision.</td>
<td>B-97</td>
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<tr>
<td>9.10</td>
<td>Classroom decorations are changed on a regular basis and are seasonally appropriate.</td>
<td>B-98</td>
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<tr>
<td>9.11</td>
<td><strong>Developmental Program and Curriculum Units</strong></td>
<td>A-106</td>
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<td></td>
<td>The program provides developmentally appropriate opportunities for children to build an understanding of mathematics and numbers through: naming and recognizing different shapes and patterns; counting objects and materials; recognizing quantity and number symbols; using measurements and sorting; and integrating mathematical terms and concepts, including time, into everyday use.</td>
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<tr>
<td>9.12</td>
<td>The program provides developmentally appropriate opportunities for children to build an understanding of science and nature through: introducing, exploring and discussing varying scientific concepts and principles, including cause and effect; using the senses and simple tools to observe scientific features; collecting and documenting materials; and integrating scientific terms and concepts into everyday use.</td>
<td>A-107  A-108</td>
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<td>9.13</td>
<td>The program provides developmentally appropriate opportunities for children to build an understanding of technology. <strong>Please Note:</strong> Although not prohibited, this standard is not assessed for children under the age of three. Technology may include computers, tablets, listening centers and other forms of high technology and/or gears or wheels and other forms of age appropriate simple tools.</td>
<td>A-109 A-110</td>
</tr>
<tr>
<td>9.14</td>
<td>The program provides developmentally appropriate opportunities for children to build an understanding and appreciation of culturally diverse art, music, drama, and dance through: encouraging and engaging in creative expression and play; expanding artistic skills by manipulating age appropriate materials and child-sized tools; reviewing personal art and others art; and integrating artistic terms into everyday use.</td>
<td>A-111</td>
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<tr>
<td>9.15</td>
<td>The program provides developmentally appropriate opportunities for children to build an understanding of social studies through: participating in group and community activities (including interactions with children of various ages); exploring diversity in non-stereotypical cultures, family structures, abilities, language, ages and genders; discussing fairness, friendship, responsibility, authority and differences; reviewing local geography and the varying communities at large; exploring positive and negative environmental effects; contributing to the well-being of the classroom and community; engaging in economic concepts (for children ages three and above); and connecting personal experiences to broader world concepts.</td>
<td>A-112</td>
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<tr>
<td>9.16</td>
<td>The curriculum plan must also include units on nutrition, health, and safety.</td>
<td>A-105</td>
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<td>9.17</td>
<td><strong>Developmentally Appropriate Learning</strong> Teachers encourage children to engage in meaningful play and extend their learning.</td>
<td>B-99</td>
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<td>9.18</td>
<td>Teachers encourage children to think, reason, question, and experiment by asking them questions and posing problems, regarding their experiences and play.</td>
<td>B-100</td>
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<tr>
<td>9.19</td>
<td>Teachers expand on children’s emerging skills by repeatedly engaging them in activities of interest.</td>
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| 9.20 | Teachers must engage toddlers and preschoolers with at least the following age-appropriate learning centers: table top games, dramatic play, arts and crafts, large muscle, science and nature, blocks, fine motor, math and numbers, language arts, music/movement, nutrition, and woodworking (preschoolers and school age only*).  
*Please Note: Woodworking/Carpentry is defined as using or manipulating real wooden pieces, which can be cut, glued, and/or nailed in a developmentally appropriate manner. Any tools provided must be child-sized and age-appropriate. The use of blocks from the Block Area will not meet the requirements for this standard. Proper supervision and instruction are vital for successful implementation of the Woodworking/Carpentry Area. | B-102 |
| 9.21 | When using sensory tables, all materials must be age-appropriate, nontoxic, and not pose a choking hazard.* Use of the sensory tables is closely supervised, ensuring safe conditions are met and play materials are clean.  
*Please Note: Although not prohibited, the use of food for sensory play must be closely supervised to prevent consumption and be culturally sensitive to the children in care. | B-103 |
| 9.22 | Children are regularly provided with opportunities for creative, and possibly messy activities such as water play, sand play, finger painting, and playdough. Children also have access to developmentally appropriate unstructured materials, including blocks and representational toys. | B-104  
B-105 |
| 9.23 | **Promoting Child-Choice**  
The environment is designed to promote child-choice and independence. Toys and materials are placed on low, open shelves and children are encouraged to explore materials in their own ways. | B-106 |
<p>| 9.24 | Teachers encourage the children to offer their own suggestions for activity selections throughout the day. Teachers give children time and space for extended and concentrated play by reducing distractions and interruptions. | B-107 |
| 9.25 | <strong>Promoting Pro-Social Skills, Positive Relationships and Self-Awareness</strong> | B-108 |</p>
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<td></td>
<td>Teachers encourage children to develop pro-social skills by developing relationships, learning to help others, working cooperatively with others, and learning from and with one another.</td>
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<tr>
<td>9.26</td>
<td>Teachers must foster positive relationships between children by helping them to listen and appropriately respond to one another.</td>
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<tr>
<td>9.27</td>
<td>Teachers support a child's developing awareness of self by using mirrors, photographs, and other appropriate materials for promoting self-concept.</td>
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</table>
| 9.28 | **Language and Pre-Writing Development**  
Children are given daily opportunities to write, which may include scribbling, drawing, and practicing letters and numerals. Reading and purposeful writing opportunities are available daily and children are provided support and assistance when reading and writing.  
Meaningful print is used throughout the classroom at children’s eye-level. Teachers provide opportunities for children to familiarize and recognize print through the use of classroom and personalized labels as well as posted schedules/routines and procedures. Teachers also discuss and model functional writing with children. | B-111 B-112 B-113 |
| 9.29 | Children’s language development is encouraged through a variety of songs, stories, books and games, including those that are multicultural and diverse.  
Children are provided opportunities to expand their language development through follow up regarding their experiences and field trips, including walks. | B-114 |
| 9.30 | Teachers expand children’s print and language development daily by reading books to them individually or in a group setting. Children are provided opportunities to interact with the story and ask questions.  
Teachers read books that align with the goals and aspects of the curriculum. | B-115 B-116 B-117 |
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<tr>
<td>9.31</td>
<td>The program has a policy and practice of incorporating the family language whenever possible, into a child’s opportunities for language acquisition and communication development, if a child speaks a different language.</td>
<td>A-113</td>
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<tr>
<td>9.32</td>
<td><strong>Active Physical Play and Development</strong>&lt;br&gt;Teachers encourage, promote and engage children in active physical play.</td>
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<tr>
<td>9.33</td>
<td>Teachers provide appropriate large-muscle activities for each child and the opportunity for the development of eye-hand and eye-foot coordination.</td>
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<td>9.34</td>
<td><strong>Use of Television and Other Electronic Technology</strong>&lt;br&gt;Television, computers, and other electronics are limited to 30 minutes per week for educational materials/activities that are suitable to the developmental level of the child. If children watch television or movies and use computers or other technological media, the teacher is with the children, asking questions and initiating conversations that will encourage children to think, reason, question, and experiment. If a television is present, it must be anchored or mounted to prevent tipping over.</td>
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# Chapter 10: Outdoor Play Area

*Please Note:* If the program does not have a dedicated or on-site playground/outdoor play space, the program is required to select N/A for Verifications Items B-125 through B-127 AND complete Section 10(B) of the NECPA Self Assessment Instrument.

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| 10.1 | **Outdoor Play Materials and Activities**<br>Weather permitting,* the program provides all children, including infants, with daily outdoor opportunities for gross motor/large muscle development. Outdoor activities are both teacher-directed and child-directed. The outdoor play area must include age appropriate materials for the children served.  
*Please Note: The National Weather Service (NWS) identifies the following weather conditions as posing a significant health risk, wind chill factor at or below minus 15°F and heat index at or above 90°* | B-136 |
| 10.2 | **Equipment, Enclosures, Coverings, and Surfacing of Outdoor Play Areas**<br>The facility should provide an outdoor play area that is adjacent to the interior classrooms OR can be safely accessed. | B-126 |
| 10.3 | The program has adequate space for outdoor play, specifies outdoor play times by age group and limits the number of children from the program allowed on the outdoor play space at any one time. | B-131 |
| 10.4 | Outdoor play equipment must be of safe design and in good repair. The space also includes open space for running that is free of other equipment. | B-126 |
| 10.5 | The surface under any playground equipment needing fall zones must extend at least 6 feet beyond the perimeter of any playground equipment and must be made of appropriate, non-abrasive, cushioning materials as recommended by the Consumer Product Safety Commission and ASTM International Standards. If fall zones are surfaced with ‘loose-fill’ materials, (ex: wood mulch or chips, fine loose sand, pea gravel, or shredded tires), it must meet an initial fill of 12 inches and/or a compressed/settled fill of 9 inches. | B-126  
B-127 |
<p>| 10.6 | The program provides children access to clean drinking water while outside. | B-133 |</p>
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<tr>
<td>10.7</td>
<td>The program posts written playground safety rules.</td>
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<td>10.8</td>
<td>Each child has at least one change of clothing that is weather appropriate for daily outdoor play.</td>
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<td><strong>10.9</strong></td>
<td><strong>Maintenance of Playgrounds and Outdoor Play Areas</strong></td>
<td>A-115/B-126</td>
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<td></td>
<td>All outdoor activity areas must be maintained in a clean and safe condition. The general playground surfaces is checked daily for broken glass, nails, trash, and animal excrement. Holes or abandoned wells within the site must be properly filled or sealed. The area is well drained with no standing water.</td>
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<td>10.10</td>
<td>The playground inspection log must be maintained at all times to reflect daily playground inspections for the following:</td>
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<td>A) Visible cracks, bending or warping, rusting, or breakage of any equipment;</td>
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<td></td>
<td>B) Deformation of open hooks, shackles, rings, links, and so forth;</td>
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<td></td>
<td>C) Worn swing hangers and chains;</td>
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<td>D) Missing, damaged, or loose swing seats;</td>
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<td>E) Broken supports or anchors;</td>
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<td>F) Cement support footings that are exposed, cracked, or loose in the ground;</td>
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<td>G) Accessible sharp edges or points;</td>
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<td>H) Exposed ends of tubing that require covering with plugs or caps;</td>
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<td>I) Protruding bolt ends that have lost caps or covers;</td>
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<td>J) Loose bolts, nuts, and so forth that require tightening;</td>
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<td>K) Nails that have worked loose;</td>
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<td></td>
<td>L) Splintered, cracked, or otherwise deteriorating wood;</td>
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<td>M) Lack of lubrication on moving parts;</td>
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<td>N) Worn bearings or other mechanical parts;</td>
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<td>O) Broken or missing rails, steps, rungs, or seats;</td>
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<td>P) Worn or scattered surfacing material;</td>
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<td>Q) Hard surfaces, especially under swings, slides, and so forth (e.g., places where resilient material has shifted away from any surface underneath play equipment);&lt;br&gt;R) Chipped or peeling paint;&lt;br&gt;S) Pinch or crush points, exposed mechanisms, juncture, and moving components.</td>
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<tr>
<td>10.11</td>
<td><strong>Enclosures for Outdoor Play Areas</strong>&lt;br&gt;The outdoor play area is enclosed with a fence or natural barriers. Fences and barriers must not prevent the teachers’ direct supervision of children.</td>
<td>B-126</td>
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<tr>
<td>10.12</td>
<td>Teachers ensure continuous sight and sound supervision when on the outdoor play space through:&lt;br&gt;   A) Viewing the entire outdoor play space;&lt;br&gt;   B) Being responsible for a group of children;&lt;br&gt;   C) Being responsible for a specific area of the play space.&lt;br&gt;&lt;strong&gt;Please Note:&lt;/strong&gt; Children must be able to be seen and heard at all times by the teacher. For example, if the teacher is working one-on-one with a child, but is able to see all of the children by slightly moving their position, then this standard is met.</td>
<td>B-132</td>
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# NECPA Standard

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<tr>
<td>11.1</td>
<td><strong>Program Information to Parents/Guardians</strong></td>
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<td></td>
<td>Information about the program is given to prospective families.</td>
<td>A-116</td>
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<td></td>
<td>New parents/guardians are oriented and informed in writing about the program, curriculum, child abuse reporting requirements, conflict resolution policy, parent activity opportunities, community social services, policy or regulatory changes, termination procedures, process for orienting a child to the program, open door policy, daily communication policy between parents and staff, parent conferences, and other critical issues that could potentially affect the program.</td>
<td>A-117</td>
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<tr>
<td>11.2</td>
<td>The program must offer a parent display/bulletin board which covers, at a minimum, program description, policy statements, philosophy, schedules, health care services and menus.</td>
<td>A-118</td>
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<td></td>
<td>Parents are given information regarding social services within the community including health care services, assistance with basic and emergency family needs, and tuition payment alternatives.</td>
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<tr>
<td>11.3</td>
<td><strong>Parent/Guardian Center and Program Involvement</strong></td>
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<td>Parents are welcome visitors in the program at all times. Parents and other family members are encouraged to be involved in the program in various ways, taking into consideration other demands on the parents.</td>
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<td>11.4</td>
<td>Parents/guardians are invited to share their culture and traditions, their skills, and talents.</td>
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<td>Parents/guardians are encouraged to provide information about their culture and family traditions during the enrollment period and throughout their child’s care at the program</td>
<td>A-121</td>
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<td>11.5</td>
<td>Teachers are encouraged to speak to each child's parents/guardians on a regular basis in order to briefly discuss the child’s day and to report any unusual occurrence or special success.</td>
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| 11.6 | **Parent/Guardian-Teacher Conferences**  
Parent/guardian-teacher conferences are held at least twice a year and at other times as needed, to discuss individual children’s needs, progress/assessment, and accomplishments. Records of these conferences are kept, documenting discussions of the child’s development, health and any referrals made. | A-123 |
| 11.7 | **Parent/Guardian Education**  
The program provides parent education opportunities which are culturally sensitive and inclusive, and whenever possible, provided in the primary language of the families being served. | A-125 |
| 11.8 | **Transitioning Children from Program**  
The program has a procedure for transitioning children to another program, elementary school, or classroom within the program. This process includes reviewing children’s specific needs, a family needs assessment, and a mechanism to share the summary of information to support the child’s transition to another classroom or program. An informed consent form must be signed by the parent that identifies specifically what information will be shared. | A-126 |
| 11.9 | **Confidentiality of Records**  
Information about children and families is held in strict confidence by the teachers and program staff. The teachers and staff must not discuss children or their families with one another except in private when necessary to plan for the best interest of the child. | A-139 |
| 11.10 | **Community Outreach**  
The program has a written process for reaching out to the community to make it aware of the program and its needs and services. | A-127 |
# Chapter 12: Health and Safety

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<td>12.1</td>
<td><strong>Evacuation Plan and Drills</strong></td>
<td>A-128</td>
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<td></td>
<td>The program must have a written plan for reporting</td>
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<td></td>
<td>and evacuating in case of natural disasters that</td>
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<td>could create structural damage to the program or</td>
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<td>pose health hazards. The program must also have</td>
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<td>written plans for situations that may require</td>
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<td></td>
<td>evacuation, lockdown, and shelter in place.</td>
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<td>The program also includes procedures for staff</td>
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<td>training on these emergency plans.</td>
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<td>12.2</td>
<td>Evacuation drills are practiced in accordance with</td>
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<td></td>
<td>the natural disasters most likely to occur near the</td>
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<td>program. At a minimum, the program must conduct</td>
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<td>monthly fire drills and record them in a log/record.</td>
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<td>Drills encompass all periods of time, morning to</td>
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<td>evening, when the program is open.</td>
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<td>12.3</td>
<td>The program has an emergency exit plan showing</td>
<td>B-139</td>
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<td>escape routes from each area/room. The number for</td>
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<td>poison control is posted in each area/room where it</td>
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<td>can be easily accessed during an emergency.</td>
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<td>12.4</td>
<td><strong>Emergency Plans</strong></td>
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<td>The program must have a written plan for reporting</td>
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<td>and managing any incident of unusual occurrence that</td>
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<td>is threatening to the health, safety, or welfare of</td>
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<td>the children or staff.</td>
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<td>The Emergency/Disaster Plan must include:</td>
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<td>A) Knowledge of potential regional disaster</td>
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<td>situations that may impact the program and will</td>
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<td>need future planning and preparedness;</td>
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<td>B) Identification and contact information for the</td>
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<td>agencies that are the first point of contact in the</td>
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<td>event of emergency or disaster. These would</td>
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<td>include agencies that are knowledgeable of child</td>
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<td>care regulations, and that will provide guidance</td>
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<td>in these crisis situations.</td>
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<td>C</td>
<td>Program based, routinely scheduled emergency drills that occur with participation of community emergency preparedness exercises (such as, tornado drills accompanied by community air raid sirens);</td>
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<td>D</td>
<td>Joint planning that occurs with community partners, such as the Red Cross, local hospitals and physicians, the emergency management agency, first responders and emergency personnel, and others that will provide services during crisis situation;</td>
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<td>E</td>
<td>Communication strategies to be implemented during times of emergency and disaster, such website and email notifications, the use of texts and text alerts, or posting of information either at the facility or some other location;</td>
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<td>F</td>
<td>A system of communicating with emergency management personnel (such as, alternatives to cell phones if service is unavailable);</td>
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<td>G</td>
<td>Emergency management plans and practices that include responding to an intruder or threat, handling shelter in place situations, evacuation procedures, and arranging for any special health care needs of children in care;</td>
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<td>H</td>
<td>Identification and arrangement of a primary and secondary meeting location for parents/guardians to pick up their children;</td>
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<td>I</td>
<td>Organizational continuity plans that address how the program will continue to operate in time of crisis or emergency. This includes making sure that all records are backed up and able to be accessed if needed. There should also be plans for how the program will continue to pay their bills, including paying staff;</td>
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<td>J</td>
<td>Plans should be developed for a variety of emergencies and scenarios, and should make provisions for inclusion of the following:</td>
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<td>1) Ensuring each child’s emergency contact information is readily available</td>
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<td>2) A plan for caring for children until their parents/guardians are able to reach them;</td>
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<td>3) Provisions for emergency food/water/supplies that may be needed by children and staff in the event of shelter in place or some other emergency.</td>
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<td>4) Plans for medication administrations that are identified in children’s medical plans;</td>
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<td>5) Protocols that should be implemented in case of an infectious disease outbreak;</td>
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<td>6) Protocols that should be followed if a disaster or emergency occurs during a field trip or other times when the children are away from the facility; and</td>
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<td>7) Clearly defined staff roles, responsibilities and tasks during varying emergencies.</td>
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<tr>
<td>12.5</td>
<td>Details in the Emergency/Disaster Plan must be reviewed and updated bi-annually and immediately after any relevant event to incorporate any best practices into the document.</td>
<td>A-131</td>
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</table>
| 12.6 | One person is designated as responsible for safeguarding emergency contact information on each child and for taking charge in the event of an emergency. A second person is designated in writing if the primary person is absent.  

*Please Note:* Emergency contact information is easily accessible to staff, meaning the information is unlocked, labeled, and accessible in less than 60 seconds.                                                                 | A-128  
   B-141 |
| 12.7 | **Urgent Medical Care or Threatening Incidents Plans**  
The program must have a written plan for reporting and managing what they identify as an incident or unusual occurrence that is threatening to the health, safety, or welfare of the children, staff, or volunteers. The program must also include procedures of staff training on this plan.  

There must be a written plan for handling the following types of incidents:  
A) Lost or missing child;  
B) Suspected maltreatment of a child;  
C) Suspected sexual, physical, or emotional maltreatment or abuse of staff, volunteers, or parents/guardians that occur at the program;  
D) Medical, dental, and mental health emergencies;  
E) Child or staff deaths, both as a result of an accident or a prolonged illness. These include plans that address deaths at the facility, as well as those that occur off site;  
F) Unauthorized, contentious, or intoxicated/impaired parents/guardians/family members;  
G) Dangerous intruders who try to gain admittance to the facility.                                                                 | A-129  |
| 12.8 | The following procedures, at a minimum, should be addressed in the plan for urgent care:  

A) Parent/guardian signed authorization for the teacher to seek emergency medical treatment;                                                                                                                        | A-132  |
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<td>B)</td>
<td>Parent/guardian signed consent forms allowing the program to share children’s health information with emergency medical professionals and other necessary service providers; C) Procedures to inform parents/guardians of the emergency situation; D) Parent/guardian identification of their preferred hospital, medical and/or dental provider; E) A written incident/injury report; F) Protocols to refill and restock the first aid kit if any supplies were used.</td>
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| 12.9 | **Immunizations**  
The program notifies parents of required health and immunization schedules, including time frames that they are to be completed. | **A-139** |
# Chapter 13: Program Evaluation

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<tr>
<th>#</th>
<th>NECPA Standard</th>
<th>SAI #</th>
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<tr>
<td>13.1</td>
<td>At least annually, directors, parents, program staff and other ancillary professionals must be involved in a written evaluation of the program's effectiveness in meeting the needs of children and parents. This assessment is programmatic and is not an assessment of the individual child's progress.</td>
<td>A-135</td>
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<td>13.2</td>
<td>This evaluation is then be used to inform the program's continuous quality improvement plan. Based upon the annual evaluation, the program identifies at least two goals and the specific action steps towards completing those goals. This evaluation must also include feedback from both parents and staff.</td>
<td>A-137</td>
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<td>13.3</td>
<td>Asking parent/guardian input is important to developing and maintaining a quality child care program. This process can be accomplished by holding forums or small group meetings to receive feedback from parents/guardians. Programs also offer parents/guardians an opportunity to respond in writing anonymously.</td>
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### Chapter 14: Program Administration and Staff Relations

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<tr>
<td>14.1</td>
<td><strong>Licensing</strong>&lt;br&gt;The program shall hold a license in good standing with the state agency responsible for licensing child care centers and early childhood programs. The NECPA Commission will consider license-exempt programs for enrollment on a case by case basis.</td>
<td>A-138</td>
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<tr>
<td>14.2</td>
<td><strong>Program Policies</strong>&lt;br&gt;The program has the following policies in writing and these policies are updated annually. Policies are of no value if there isn’t an implementation plan in place to ensure they are in effect.&lt;br&gt;These policies and plans must include, but are not be limited to, the following:</td>
<td></td>
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<tr>
<td></td>
<td>A) Inclusion of children with developmental delays and special health care needs;</td>
<td>A-89</td>
</tr>
<tr>
<td></td>
<td>B) Nondiscrimination in the classroom; based on race, color, national origin, family structure, religion, sex, gender identity (including gender expression), sexual orientation, disability, age, etc.;</td>
<td>A-139</td>
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<tr>
<td></td>
<td>C) Required health and immunization schedules, including time frames that they are to be completed;</td>
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<td></td>
<td>D) Protocols in case of emergency medical situations, including accidents and crisis situations;</td>
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<td></td>
<td>E) When to use the services of child care health consultants (including mental/behavior health);</td>
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<td></td>
<td>F) Confidentiality of individual information and records;*</td>
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<td></td>
<td>G) Ensuring safety while sleeping, including supervision requirements, areas and materials used for sleeping as well as defining infant safe sleeping practices;</td>
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<td></td>
<td>H) Universal precautions, cleanliness, sanitation and hygiene requirements that include the policy on handwashing and expectations of child and staff handwashing procedures;</td>
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<td></td>
<td>I) Diaper changing and toilet training;</td>
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<td></td>
<td>J) Evening, weekend, and night care plans if the program offers;</td>
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<td></td>
<td>K) The storage and use of any toxic materials in and outside of the facility;</td>
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<tr>
<td>#</td>
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<tr>
<td>        L)</td>
<td>Care and hygiene requirements for any pets that may be on-site, including fish, insects and reptiles (if applicable);</td>
<td></td>
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<tr>
<td>        M)</td>
<td>Parent conflict resolution procedure;</td>
<td></td>
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<tr>
<td>        N)</td>
<td>Prevention of unauthorized persons from observing in or entering the toileting area;</td>
<td></td>
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<tr>
<td>        O)</td>
<td>Transportation and activities that occur off site, such as field trips;</td>
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<tr>
<td>        P)</td>
<td>Schedule for reviewing all policies, plans and operations of the program;</td>
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*Please Note: The confidentiality policy outlines that program staff do not discuss children or their families with one another except in private and only when necessary to plan for the best interest of the child.*

| &nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;A) | Names, addresses, and phone numbers of parents or guardians; |
| &nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;B) | Emergency contact information; |
| &nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;C) | Emergency medical treatment authorization/permission form; |
| &nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;D) | Physician's name and phone number; |
| &nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;E) | Allergies; |
| &nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;F) | Authorization to release to someone other than parent/guardian(s); |
| &nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;G) | Immunizations or immunization exemptions; |
| &nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;H) | Developmental history; |
| &nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;I) | Health status, which includes results of health exam and screenings indicating typical or atypical results and any necessary follow-up documented; |
| &nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;J) | Instructions for any special needs or chronic illness; |
| &nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;K) | Progress report; |
| &nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;L) | Parent/guardian(s) conference reports; |
| &nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;M) | Field trip permission forms; |
| &nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;N) | Regular/recurring transportation permission form. |

### 14.3 Maintenance of Records

The program maintains the following records:

- A) Names, addresses, and phone numbers of parents or guardians;
- B) Emergency contact information;
- C) Emergency medical treatment authorization/permission form;
- D) Physician's name and phone number;
- E) Allergies;
- F) Authorization to release to someone other than parent/guardian(s);
- G) Immunizations or immunization exemptions;
- H) Developmental history;
- I) Health status, which includes results of health exam and screenings indicating typical or atypical results and any necessary follow-up documented;
- J) Instructions for any special needs or chronic illness;
- K) Progress report;
- L) Parent/guardian(s) conference reports;
- M) Field trip permission forms;
- N) Regular/recurring transportation permission form.

### 14.4 Administrative Offices and Staff Areas
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<tr>
<td></td>
<td>The program should have a designated administrative office space or area. This space should be available for program administration, staff and other adults involved with the program. This space is not accessible to children, except those that are closely monitored by staff.</td>
<td></td>
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<tr>
<td>14.5</td>
<td>The program provides staff with a staff lounge or separate area where breaks may occur as well as a staff bathroom.</td>
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Colorado Next Generation QRIS Standards

The following section is for **COLORADO PROGRAMS ONLY** who wish to pursue the Next Generation Level 4 Standing. The burden of proof falls entirely on the program. All evidence must be prepared and organized in the program’s documentation box/file.

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<tr>
<th>#</th>
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</table>
| CO. 3.3.A | **Benefits**<br>The program offers full-time staff a compensation package with benefit options that include paid holidays, paid time off, health/dental insurance and at least three additional benefits such as:<br>  A) Life Insurance  
  B) Employee Child Discount  
  C) Retirement Plan  
  D) Disability Insurance  
  E) Other___________________ | CO-1 |
| CO. 3.4.A | **Business Administration**<br>The program has a current business plan and/or strategic plan, created or revised in the past 36 months.<br>The program has a current year operations budget and quarterly income and expense statements that show revenues, expenses, and budget compared to actual.<br>The program provides documentation of a certified financial review. | CO-2  
  CO-3  
  CO-4 |
Ohio Step Up To Quality (SUTQ) QRIS Standards

The following section is for **OHIO PROGRAMS ONLY** who wish to pursue the Step Up To Quality Level Three Standing and/or additional points for Level 4 or 5 Standing. The burden of proof falls entirely on the program. All evidence must be prepared and organized in the program’s documentation box/file. 

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<td>OH</td>
<td><strong>Curriculum and Planning</strong></td>
<td>OH-1</td>
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<tr>
<td></td>
<td>Program implements a written, research-based, comprehensive curriculum aligned with the Early Learning and Development Standards and/or Ohio's K-12 Standards (appropriate to the age groups served) and demonstrates its alignment to assessment. Teachers use a written, dated plan of activities that is aligned to all developmental domains in Early Learning and Development Standards and/or Ohio's K-12 Standards (appropriate to the age groups served).</td>
<td></td>
</tr>
<tr>
<td>OH</td>
<td><strong>Child Screening and Assessment</strong></td>
<td>OH-2</td>
</tr>
<tr>
<td></td>
<td>Program ensures that all children (except school age children) receive a comprehensive, developmental screening that is valid and reliable within 60 business days of entry into the program and annually thereafter. Necessary referrals are completed within 90 days of identification of need, and the results are formally communicated with families. Program administers assessments that meet state requirements for all enrolled preschool-aged children.</td>
<td></td>
</tr>
<tr>
<td>OH</td>
<td><strong>Staff Education</strong></td>
<td>OH-3</td>
</tr>
</tbody>
</table>
|    | Administrator has an AA in ECE (or approved related field for school age-only programs) or CPL 3. Fifty-percent of lead teachers have an AA appropriate to the age groups noted below or a CPL 3:  
  - Early Childhood Teachers–An AA in ECE or an approved related field.  
  - School-Age Teachers–An AA in an approved field. |
# Caring for Our Children Basics Health and Safety Standards Alignment Tool for Child Care Centers and Family Child Care Homes

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Introduction

Caring for Our Children Basics (CFOCB) represents the minimum health and safety standards experts believe should be in place where children are cared for outside their own homes, whether in a home-based program or center-based facility. It does not, however, represent all standards that should be present to achieve the highest quality of care and early learning. For example, the caregiver training requirements outlined in these standards are designed only to prevent harm to children, not to ensure children’s optimal development and learning.

Although use of Caring for Our Children Basics is voluntary, the Administration for Children and Families (ACF) hopes Caring for Our Children Basics will be a helpful resource for States and other entities as they work to improve health and safety standards in both licensing and quality rating improvement systems (QRIS). This tool provides a simple format for States and Territories to compare their current early childhood program requirements and standards against the recommended health and safety standards in CFOCB. It may also be used as a reference by the following:

- Professional development program staff when reviewing training content
- Licensing staff and policy developers when drafting new standards or best practice guidelines and training new staff
- Quality rating and improvement system staff when developing and evaluating quality standards
- Training and technical assistance professionals in their work with child care providers
- Advocates and advisory councils as a blueprint for long-term planning

Instructions

1. Compare state licensing or QRIS standards to Caring for Our Children Basics (CFOCB). State licensing or QRIS standards can be copied into the standard section. The notes section can be used to document gaps in state standards or ways state standards exceed CFOCB standards.
2. Indicate whether the state standards reflect full, partial, or no alignment with each CFOCB standard.

Full alignment means the two standards align with one another on every element, but may not match word for word. For example, CFOCB 1.4.3.1, First Aid and CPR Training for Staff, reads as follows: “All staff members involved in providing direct care to children should have up-to-date documentation of satisfactory completion of training in pediatric first aid and current certification in pediatric CPR. Records of successful completion of training in pediatric first aid and CPR should be maintained in the personnel files of the facility.”

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1 Caring for Our Children Basics (CFOCB) is the result of work from both Federal and non-Federal experts. The Office of Child Care, Office of Head Start, Office of the Deputy Assistant Secretary for Early Childhood, and the Maternal and Child Health Bureau were instrumental in this effort. CFOCB is available at [http://www.acf.hhs.gov/programs/ecd/caring-for-our-children-basics](http://www.acf.hhs.gov/programs/ecd/caring-for-our-children-basics).

CFOCB is based on Caring for Our Children: National Health and Safety Performance Standards; Guidelines for Early Care and Education Programs, Third Edition (CFOC3), developed by the American Academy of Pediatrics, the American Public Health Association, and the National Resource Center for Health and Safety in Child Care and Early Education, with funding from the Maternal and Child Health Bureau. CFOC3 is a collection of 686 national standards that represent the best evidence, expertise, and experience in the country on quality health and safety practices and policies that should be followed in today’s early care and education settings. CFOC3 is often used by state regulatory agencies when they are revising and updating state child care regulations. CFOC3 is available at [http://cfoc.nrckids.org/](http://cfoc.nrckids.org/).
Partial alignment means the state standard aligns with CFOCB on most but not all elements. The following example uses the same CFOCB standard, 1.4.3.1, First Aid and CPR Training for Staff. “All staff members involved in providing direct care to children should have up-to-date documentation of satisfactory completion of training in pediatric first aid and current certification in pediatric CPR. Records of successful completion of training in pediatric first aid and CPR should be maintained in the personnel files of the facility.”

No alignment indicates that the state standard significantly varies from CFOCB; that is, fewer than half of the elements align with one another, no elements align with one another, or there is no state standard that aligns with CFOCB. The following example uses the same CFOCB standard, 1.4.3.1, First Aid and CPR Training for Staff. “All staff members involved in providing direct care to children should have up-to-date documentation of satisfactory completion of training in pediatric first aid and current certification in pediatric CPR. Records of successful completion of training in pediatric first aid and CPR should be maintained in the personnel files of the facility.”

3. In addition to capturing alignment similarities and differences, the notes section can be used to capture information for implementation plans, stakeholder comments, ideas for future rule and standard development, or where the current state standard exceeds CFOCB recommendations. It can also be noted if the CFOCB standard is addressed in other ways such as policies or guidance.

4. Because this tool is lengthy, users can start by completing the sections of greatest interest by clicking on the topic title in the Table of Contents.
CFOCB Health and Safety Standards Alignment Tool

Staffing

1.1.1.1–1.1.1.5 Ratios for Centers and Family Child Care Homes

Appropriate ratios should be kept during all hours of program operation. Children with special health care needs or who require more attention due to certain disabilities may require additional staff on-site, depending on their needs and the extent of their disabilities.

In center-based care, child-provider ratios should be determined by the age of the majority of children and the needs of children present.

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<td>13-23 months</td>
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In family child care homes, the provider’s own children under the age of 6, as well as any other children in the home temporarily requiring supervision, should be included in the child: provider ratio. In family child care settings where there are mixed age groups that include infants and toddlers, a maximum ratio of 6:1 should be maintained and no more than two of these children should be 24 months or younger. If all children in care are under 36 months, a maximum ratio of 4:1 should be maintained and no more than two of these children should be 18 months or younger. If all children in care are 3 years old, a maximum ratio of 7:1 should be preserved. If all children in care are 4 to 5 years of age, a maximum ratio of 8:1 should be maintained.

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1.2.0.2 Background Screening

All caregivers/teachers and staff in early care and education settings (in addition to any individual age 18 and older, or a minor over age 12 if allowed under State law and if a registry/database includes minors, residing in a family child care home) should undergo a complete background screening upon employment and once at least every five years thereafter. Screening should be conducted as expeditiously as possible and should be completed within 45 days after hiring. Caregivers/teachers and staff should not have unsupervised access to children until screening has been completed. Consent to the background investigation should be required for employment consideration.

The comprehensive background screening should include the following:

a. A search of the State criminal and sex offender registry or repository in the State where the child care staff member resides, and each State where such staff member resided during the preceding 5 years;

b. A search of State-based child abuse and neglect registries and databases in the State where the child care staff member resides, and each State where such staff member resided during the preceding 5 years; and


Directors/programs should review each employment application to assess the relevancy of any issue uncovered by the complete background screening, including any arrest, pending criminal charge, or conviction, and should use this information in employment decisions in accordance with state laws.

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1.4.1.1/1.4.2.3 Pre-service Training/Orientation

Before or during the first three months of employment, training and orientation should detail health and safety issues for early care and education settings including, but not limited to, typical and atypical child development; pediatric first aid and CPR; safe sleep practices, including risk reduction of Sudden Infant Death Syndrome/Sudden Unexplained Infant Death (SIDS/SUID); poison prevention; shaken baby syndrome and abusive head trauma; standard precautions; emergency preparedness; nutrition and age-appropriate feeding; medication administration; and care plan implementation for children with special health care needs. Caregivers/teachers should complete training before administering medication to children. See Standard 3.6.3.3 for more information. All directors or program administrators and caregivers/teachers should document receipt of training.

Providers should not care for children unsupervised until they have completed training in pediatric first aid and CPR; safe sleep practices, including risk reduction of Sudden Infant Death Syndrome/Sudden Unexplained Infant Death (SIDS/SUID); standard precautions for the prevention of communicable disease; poison prevention; and shaken baby syndrome/abusive head trauma.
### 1.4.3.1 First Aid and CPR Training for Staff

All staff members involved in providing direct care to children should have up-to-date documentation of satisfactory completion of training in pediatric first aid and current certification in pediatric CPR. Records of successful completion of training in pediatric first aid and CPR should be maintained in the personnel files of the facility.

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### 1.4.4.1/1.4.4.2 Continuing Education for Directors, Caregivers/Teachers in Centers, and Family Child Care Homes

Directors and caregivers/teachers should successfully complete intentional and sequential education/professional development in child development programming and child health, safety, and staff health based on individual competency and any special needs of the children in their care.

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1.4.5.2 Child Abuse and Neglect Education

Caregivers/teachers should be educated on child abuse and neglect to establish child abuse and neglect prevention and recognition strategies for children, caregivers/teachers, and parents/guardians. The education should address physical, sexual, and psychological or emotional abuse and neglect. Caregivers/teachers are mandatory reporters of child abuse or neglect. Caregivers/teachers should be trained in compliance with their state’s child abuse reporting laws.

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Program Activities for Healthy Development

2.1.1.4 Monitoring Children’s Development/Obtaining Consent for Screening

Programs should have a process in place for age-appropriate developmental and behavioral screenings for all children at the beginning of a child’s enrollment in the program, at least yearly thereafter, and as developmental concerns become apparent to staff and/or parents/guardians. Providers may choose to conduct screenings, themselves; partner with a local agency/health care provider/specialist who would conduct the screening; or work with parents in connecting them to resources to ensure that screening occurs. This process should consist of parental/guardian education, consent, and participation as well as connection to resources and support, including the primary health care provider, as needed. Results of screenings should be documented in child records.

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2.1.2.1/2.1.3.1 Personal Caregiver/Teacher Relationships for Birth to Five-Year-Olds

Programs should implement relationship-based policies and program practices that promote consistency and continuity of care, especially for infants and toddlers. Early care and education programs should provide opportunities for each child to build emotionally secure relationships with a limited number of caregivers/teachers. Children with special health care needs may require additional specialists to promote health and safety and to support learning.

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2.2.0.1 Methods of Supervision of Children

In center-based programs, caregivers/teachers should directly supervise children under age 6 by sight and sound at all times. In family child care settings, caregivers should directly supervise children by sight or sound. When children are sleeping, caregivers may supervise by sound with frequent visual checks.

Developmentally appropriate child-to-staff ratios should be met during all hours of operation, and safety precautions for specific areas and equipment should be followed. Children under the age of 6 should never be inside or outside by themselves.
2.2.0.4 Supervision Near Water

Constant and active supervision should be maintained when any child is in or around water. During swimming and/or bathing where an infant or toddler is present, the ratio should always be one adult to one infant/toddler. During wading and/or water play activities, the supervising adult should be within an arm’s length providing “touch supervision.” Programs should ensure that all pools have drain covers that are used in compliance with the Virginia Graeme Baker Pool and Spa Safety Act.²

2.2.0.8 Preventing Expulsions, Suspensions, and Other Limitations in Services

Programs should have a comprehensive discipline policy that includes developmentally appropriate social-emotional and behavioral health promotion practices as well as discipline and intervention procedures that provide specific guidance on what caregivers/teachers and programs should do to prevent and respond to challenging behaviors. Programs should ensure all caregivers/teachers have access to pre- and in-service training on such practices and procedures. Practices and procedures should be clearly communicated to all staff, families, and community partners, and implemented consistently and without bias or discrimination. Preventive and discipline practices should be used as learning opportunities to guide children’s appropriate behavioral development.

Programs should establish policies that eliminate or severely limit expulsion, suspension, or other exclusionary discipline (including limiting services); these exclusionary measures should be used only in extraordinary circumstances where there are serious safety concerns that cannot otherwise be reduced or eliminated by the provision of reasonable modifications.

2.2.0.9 Prohibited Caregiver/Teacher Behaviors

The following behaviors should be prohibited in all early care and education settings:

a. The use of corporal punishment, including, but not limited to:
   i. Hitting, spanking, shaking, slapping, twisting, pulling, squeezing, or biting;
   ii. Demanding excessive physical exercise, excessive rest, or strenuous or bizarre postures;
   iii. Compelling a child to eat or have in his/her mouth soap, food, spices, or foreign substances;
   iv. Exposing a child to extremes of temperature.

d. Isolating a child in an adjacent room, hallway, closet, darkened area, play area, or any other area where a child cannot be seen or supervised;

e. Binding, tying to restrict movement, or taping the mouth;

f. Using or withholding food or beverages as a punishment;

g. Toilet learning/training methods that punish, demean, or humiliate a child;

h. Any form of emotional abuse, including rejecting, terrorizing, extended ignoring, isolating, or corrupting a child;

i. Any abuse or maltreatment of a child;

j. Abusive, profane, or sarcastic language or verbal abuse, threats, or derogatory remarks about the child or child’s family;

k. Any form of public or private humiliation, including threats of physical punishment;

l. Physical activity/outdoor time taken away as punishment;

m. Placing a child in a crib for a time-out or for disciplinary reasons.
Health Promotion and Protection

3.1.3.1 Active Opportunities for Physical Activity

Programs should promote developmentally appropriate active play for all children, including infants and toddlers, every day. Children should have opportunities to engage in moderate to vigorous activities indoors and outdoors, weather permitting.

3.1.4.1 Safe Sleep Practices and SIDS Risk Reduction

All staff, parents/guardians, volunteers, and others who care for infants in the early care and education setting should follow safe sleep practices as recommended by the American Academy of Pediatrics (AAP). Cribs must be in compliance with current U.S. Consumer Product Safety Commission (CPSC) and ASTM International safety standards. See Standard 5.4.5.2 for more information.

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3.1.5.1 Routine Oral Hygiene Activities

Caregivers/teachers should promote good oral hygiene through learning activities including the habit of regular tooth brushing.

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3.2.1.4 Diaper Changing Procedure

The following diaper changing procedure should be posted in the changing area and followed to protect the health and safety of children and staff:

- Step 1: Before bringing the child to the diaper changing area, perform hand hygiene and bring supplies to the diaper changing area.
- Step 2: Carry/bring the child to the changing table/surface, keeping soiled clothing away from you and any surfaces you cannot easily clean and sanitize after the change. Always keep a hand on the child.
- Step 3: Clean the child’s diaper area.
- Step 4: Remove the soiled diaper and clothing without contaminating any surface not already in contact with stool or urine.
- Step 5: Put on a clean diaper and dress the child.
- Step 6: Wash the child’s hands and return the child to a supervised area.
- Step 7: Clean and disinfect the diaper-changing surface. Dispose of the disposable paper liner if used on the diaper changing surface in a plastic-lined, hands-free, covered can. If clothing was soiled, securely tie the plastic bag used to store the clothing and send home.
- Step 8: Perform hand hygiene and record the diaper change, diaper contents, and/or any problems.

Caregivers/teachers should never leave a child unattended on a table or countertop. A safety strap or harness should not be used on the diaper changing table/surface.

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3.2.2.1 Situations that Require Hand Hygiene

All staff, volunteers, and children should abide by the following procedures for hand washing, as defined by the U.S. Centers for Disease Control and Prevention (CDC):⁵

a. Upon arrival for the day, after breaks, or when moving from one group to another.

b. Before and after:
   - Preparing food or beverages;
   - Eating, handling food, or feeding a child;
   - Brushing or helping a child brush teeth;
   - Giving medication or applying a medical ointment or cream in which a break in the skin (e.g., sores, cuts, or scrapes) may be encountered;
   - Playing in water (including swimming) that is used by more than one person; and
   - Diapering.

c. After:
   - Using the toilet or helping a child use a toilet;
   - Handling bodily fluid (mucus, blood, vomit);
   - Handling animals or cleaning up animal waste;
   - Playing in sand, on wooden play sets, and outdoors; and
   - Cleaning or handling the garbage.

Situations or times that children and staff should perform hand hygiene should be posted in all food preparation, diapering, and toileting areas.

[Note: Family child care homes are exempt from posting procedures for hand washing but should follow all other aspects of this standard.]

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3.3.0.1 Routine Cleaning, Sanitizing, and Disinfecting

Programs should follow a routine schedule of cleaning, sanitizing, and disinfecting. Cleaning, sanitizing, and disinfecting products should not be used in close proximity to children, and adequate ventilation should be maintained during use.

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3.2.3.4 Prevention of Exposure to Blood and Body Fluids

Early care and education programs should adopt the use of Standard Precautions, developed by the Centers for Disease Control and Prevention (CDC), to handle potential exposure to blood and other potentially infectious fluids. Caregivers and teachers are required to be educated regarding Standard Precautions before beginning to work in the program and annually thereafter. For center-based care, training should comply with requirements of the Occupational Safety and Health Administration (OSHA).

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3.4.1.1 Use of Tobacco, Alcohol, and Illegal Drugs

Directors, caregivers, volunteers, and staff should not be impaired due to the use of alcohol, illegal drugs or prescription medication during program hours. Tobacco, alcohol, and illegal drug use should be prohibited on the premises (both indoor and outdoor environments) and in any vehicles used by the program at all times. In family child care settings, tobacco and alcohol should be inaccessible to children.

6 Standard precautions include the use of hand washing and appropriate personal protective equipment such as gloves, gowns, and masks whenever touching or exposure to patients’ body fluids is anticipated.


3.4.3.1 Emergency Procedures

Programs should have a procedure for responding to situations when an immediate emergency medical response is required. Emergency procedures should be posted and readily accessible. Child-to-provider ratios should be maintained, and additional adults may need to be called in to maintain the required ratio. Programs should develop contingency plans for emergencies or disaster situations when it may not be possible to follow standard emergency procedures. All providers and/or staff should be trained to manage an emergency until emergency medical care becomes available.

3.4.4.1 Recognizing and Reporting Suspected Child Abuse, Neglect, and Exploitation

Because caregivers/teachers are mandated reporters of child abuse and neglect, each program should have a written policy for reporting child abuse and neglect. The written policy should specify that in any instance where there is reasonable cause to believe that child abuse or neglect has occurred, the individual who suspects child abuse or neglect should report directly to the child abuse reporting hotline, child protective services, or the police, as required by state and local laws.
3.4.4.3 Preventing and Identifying Shaken Baby Syndrome and Abusive Head Trauma

All programs should have a policy and procedure to identify and prevent shaken baby syndrome and abusive head trauma. All caregivers/teachers who are in direct contact with children, including substitute caregivers/teachers and volunteers, should receive training on preventing shaken baby syndrome and abusive head trauma; recognition of potential signs and symptoms of shaken baby syndrome and abusive head trauma; strategies for coping with a crying, fussing, or distraught child; and the development and vulnerabilities of the brain in infancy and early childhood.

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3.4.5.1 Sun Safety Including Sunscreen

Caregivers/teachers should ensure sun safety for themselves and children under their supervision by keeping infants younger than six months out of direct sunlight, limiting sun exposure when ultraviolet rays are strongest and applying sunscreen with written permission of parents/guardians. Manufacturer instructions should be followed.

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3.4.6.1 Strangulation Hazards

Strings and cords long enough to encircle a child’s neck, such as those on toys and window coverings, should not be accessible to children in early care and education programs.

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3.5.0.1 Care Plan for Children with Special Health Care Needs

Children with special health care needs are defined as “. . . those who have or are at increased risk for a chronic physical, developmental, behavioral, or emotional condition and who also require health and related services of a type or amount beyond that required by children generally” (McPherson, 1998).

Any child who meets these criteria in an early care and education setting should have an up-to-date Routine and Emergent Care Plan, completed by their primary health care provider with input from parents/guardians, included in their on-site health record and readily accessible to those caring for the child. Community resources should be used to ensure adequate information, training, and monitoring is available for early care and education staff. Caregivers should undergo training in pediatric first aid and CPR that includes responding to an emergency for any child with a special health care need.

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3.6.1.1 Inclusion/Exclusion/Dismissal of Children

The program should notify parents/guardians when children develop new signs or symptoms of illness. Parent/guardian notification should be immediate for emergency or urgent issues. Staff should notify parents/guardians of children who have symptoms that require exclusion, and parents/guardians should remove children from the early care and education setting as soon as possible. For children whose symptoms do not require exclusion, verbal or written notification to the parent/guardian at the end of the day is acceptable. Most conditions that require exclusion do not require a primary health care provider visit before re-entering care.

When a child becomes ill but does not require immediate medical help, a determination should be made regarding whether the child should be sent home. The caregiver/teacher should determine if the illness:

a. Prevents the child from participating comfortably in activities;

b. Results in a need for care that is greater than the staff can provide without compromising the health and safety of other children;

c. Poses a risk of spread of harmful diseases to others;

d. Causes a fever and behavior change or other signs and symptoms (e.g., sore throat, rash, vomiting, and diarrhea). An unexplained temperature above 100 °F (37.8 °C) (armpit) in a child younger than 6 months should be medically evaluated. Any infant younger than 2 months of age with fever should get immediate medical attention.


If any of the above criteria are met, the child should be removed from direct contact with other children and monitored and supervised by a staff member known to the child until dismissed to the care of a parent/guardian, primary health care provider, or other person designated by the parent. The local or state health department will be able to provide specific guidelines for exclusion.

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### 3.6.1.4 Infectious Disease Outbreak Control

During the course of an identified outbreak of any reportable illness at the program, a child or staff member should be excluded if the local health department official or primary health care provider suspects that the child or staff member is contributing to transmission of the illness, is not adequately immunized when there is an outbreak of a vaccine-preventable disease, or the circulating pathogen poses an increased risk to the individual. The child or staff member should be readmitted when the health department official or primary health care provider who made the initial determination decides that the risk of transmission is no longer present. Parents/guardians should be notified of any determination.

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### 3.6.3.1/3.6.3.2 Medication Administration and Storage

The administration of medicines at the facility should be limited to:

a. Prescription or non-prescription medication (over-the-counter) ordered by the prescribing health professional for a specific child with written permission of the parent/guardian. Prescription medication should be labeled with the child’s name; date the prescription was filled; name and contact information of the prescribing health professional; expiration date; medical need; instructions for administration, storage, and disposal; and name and strength of the medication.

b. Labeled medications (over-the-counter) brought to the early care and education facility by the parent/guardian in the original container. The label should include the child’s name; dosage; relevant warnings as well as specific; and legible instructions for administration, storage; and disposal.

Programs should never administer a medication that is prescribed for one child to another child. Documentation that the medicine/agent is administered to the child as prescribed is required. Medication should not be used beyond the date of expiration. Unused medications should be returned to the parent/guardian for disposal.
All medications, refrigerated or unrefrigerated, should have child-resistant caps; be stored away from food at the proper temperature, and be inaccessible to children.

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### 3.6.3.3 Training of Caregivers/Teachers to Administer Medication

Any caregiver/teacher who administers medication should complete a standardized training course that includes skill and competency assessment in medication administration. The course should be repeated according to state and/or local regulation and taught by a trained professional. Skill and competency should be monitored whenever an administration error occurs.

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Nutrition and Food Service

4.2.0.3 Use of U.S. Department of Agriculture (USDA), Child and Adult Care Food Program (CACFP) Guidelines

Programs should serve nutritious and sufficient foods that meet the requirements for meals of the child care component of the USDA CACFP as referenced in 7 CFR 226.20.⁸

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4.2.0.6 Availability of Drinking Water

Clean, sanitary drinking water should be readily accessible in indoor and outdoor areas, throughout the day. On hot days, infants receiving human milk in a bottle may be given additional human milk, and those receiving formula mixed with water may be given additional formula mixed with water. Infants should not be given water, especially in the first six months of life.

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4.2.0.10 Care for Children with Food Allergies

Each child with a food allergy should have a written care plan that includes:

a. Instructions regarding the food(s) to which the child is allergic and steps to be taken to avoid that food;

b. A detailed treatment plan to be implemented in the event of an allergic reaction, including the names, doses, and methods of prompt administration of any medications. The plan should include specific symptoms that would indicate the need to administer one or more medications.

Based on the child’s care plan and prior to caring for the child, caregivers/teachers should receive training for, demonstrate competence in, and implement measures for:

a. Preventing exposure to the specific food(s) to which the child is allergic;

b. Recognizing the symptoms of an allergic reaction;

c. Treating allergic reactions.

The written child care plan, a mobile phone, and the proper medications for appropriate treatment if the child develops an acute allergic reaction should be routinely carried on field trips or transport out of the early care and education setting.

The program should notify the parents/guardians immediately of any suspected allergic reactions, as well as the ingestion of or contact with the problem food even if a reaction did not occur. The program should contact the emergency medical services system immediately whenever epinephrine has been administered.

Each child’s food allergies should be posted prominently in the classroom and/or wherever food is served with permission of the parent/guardian.

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4.3.1.3 Preparing, Feeding, and Storing Human Milk

Programs should develop and follow procedures for the preparation and storage of expressed human milk that ensures the health and safety of all infants, as outlined by the Academy of Breastfeeding Medicine Protocol #8; Revision 2010, and prohibits the use of infant formula for a breastfed infant without parental consent. The bottle or container should be properly labeled with the infant’s full name and date; and should only be given to the specified child. Unused breast milk should be returned to parent in the bottle or container.

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4.3.1.5 Preparing, Feeding, and Storing Infant Formula

Programs should develop and follow procedures for the preparation and storage of infant formula that ensures the health and safety of all infants. Formula provided by parents/guardians or programs should come in sealed containers. The caregiver/teacher should always follow the parent or manufacturer’s instructions for mixing and storing of any formula preparation. If instructions are not readily available, caregivers/teachers should obtain information from the World Health Organization’s Safe Preparation, Storage and Handling of Powdered Infant Formula Guidelines. Bottles of prepared or ready-to-feed formula should be labeled with the child’s full name, time, and date of preparation. Prepared formula should be discarded daily if not used.

4.3.1.9 Warming Bottles and Infant Foods

Bottles and infant foods can be served cold from the refrigerator and do not have to be warmed. If a caregiver/teacher chooses to warm them, or a parent requests they be warmed, bottles should be warmed under running, warm tap water; using a commercial bottle warmer, stove top warming methods, or slow-cooking device; or by placing them in container of warm water. Bottles should never be warmed in microwaves. Warming devices should not be accessible to children.

### 4.5.0.10 Foods that Are Choking Hazards

Caregivers/teachers should not offer foods that are associated with young children’s choking incidents to children under 4 years of age. Food for infants should be cut into pieces ¼ inch or smaller, food for toddlers should be cut into pieces ½ inch or smaller to prevent choking. Children should be supervised while eating, to monitor the size of food and that they are eating appropriately.

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### 4.8.0.1 Food Preparation Area Access

Access to areas where hot food is prepared should only be permitted when children are supervised by adults who are qualified to follow sanitation and safety procedures.

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4.9.0.1 Compliance with U.S. Food and Drug Administration (FDA) Food Code and State and Local Rules

The program should conform to applicable portions of the FDA Food Code and all applicable state and local food service rules and regulations for centers and family child care homes regarding safe food protection and sanitation practices.

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Facilities, Supplies, Equipment, and Environmental Health

5.1.1.2 Inspection of Buildings

Existing and/or newly constructed, renovated, remodeled, or altered buildings should be inspected by a building inspector to ensure compliance with applicable state and local building and fire codes before the building can be used for the purpose of early care and education.

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5.1.1.3 Compliance with Fire Prevention Code

Programs should comply with a state-approved or nationally recognized fire prevention code, such as the National Fire Protection Association (NFPA) 101: Life Safety Code.12

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5.1.1.5 Environmental Audit of Site Location

An environmental audit should be conducted before construction of a new building; renovation or occupation of an older building; or after a natural disaster to properly evaluate and, where necessary, remediate or avoid sites where children’s health could be compromised. A written report that includes any remedial action taken should be kept on file.

The audit should include assessments of:

a. Potential air, soil, and water contamination on program sites and outdoor play spaces;
b. Potential toxic or hazardous materials in building construction, such as lead and asbestos; and
c. Potential safety hazards in the community surrounding the site.

5.1.6.6 Guardrails and Protective Barriers

Guardrails or protective barriers, such as baby gates, should be provided at open sides of stairs, ramps, and other walking surfaces (e.g., landings, balconies, porches) from which there is more than a 30 inch vertical distance to fall.

5.2.4.2 Safety Covers and Shock Protection Devices for Electrical Outlets

All accessible electrical outlets should be “tamper-resistant electrical outlets” that contain internal shutter mechanisms to prevent children from sticking objects into receptacles. In settings that do not have “tamper-resistant electrical outlets,” outlets should have “safety covers” that are attached to the electrical outlet by a screw or other means to prevent easy removal by a child. “Safety plugs” may also be used if they cannot be easily removed from outlets by children and do not pose a choking risk.
5.2.4.4 Location of Electrical Devices near Water

No electrical device or apparatus accessible to children should be located so it could be plugged into an electrical outlet while a person is in contact with a water source, such as a sink, tub, shower area, water table, or swimming pool.

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5.2.8.1 Integrated Pest Management

Programs should adopt an integrated pest management program to ensure long-term, environmentally sound pest suppression through a range of practices including pest exclusion, sanitation and clutter control, and elimination of conditions that are conducive to pest infestations.

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5.2.9.1 Use and Storage of Toxic Substances

All toxic substances should be inaccessible to children and should not be used when children are present. Toxic substances should be used as recommended by the manufacturer and stored in the original labeled containers. The telephone number for the poison control center should be posted and readily accessible in emergency situations.

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5.2.9.5 Carbon Monoxide Detectors

Programs should meet state or local laws regarding carbon monoxide detectors, including circumstances when detectors are necessary. Detectors should be tested monthly, and testing should be documented. Batteries should be changed at least yearly. Detectors should be replaced according to the manufacturer’s instructions.

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5.3.1.1/5.5.0.6/5.5.0.7 Safety of Equipment, Materials, and Furnishings

Equipment, materials, furnishings, and play areas should be sturdy, safe, in good repair, and meet the recommendations of the CPSC. Programs should attend to, including, but not limited to, the following safety hazards:

- a. Openings that could entrap a child’s head or limbs;
- b. Elevated surfaces that are inadequately guarded;
- c. Lack of specified surfacing and fall zones under and around climbable equipment;
- d. Mismatched size and design of equipment for the intended users;
- e. Insufficient spacing between equipment;
- f. Tripping hazards;
- g. Components that can pinch, shear, or crush body tissues;
- h. Equipment that is known to be of a hazardous type;
- i. Sharp points or corners;
- j. Splinters;
- k. Protruding nails, bolts, or other parts that could entangle clothing or snag skin;
- l. Loose, rusty parts;
- m. Hazardous small parts that may become detached during normal use or reasonably foreseeable abuse of the equipment and that present a choking, aspiration, or ingestion hazard to a child;
- n. Strangulation hazards (e.g., straps, strings, etc.);
- o. Flaking paint;

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p. Paint that contains lead or other hazardous materials; and
q. Tip-over hazards, such as chests, bookshelves, and televisions.

Plastic bags that are large enough to pose a suffocation risk as well as matches, candles, and lighters should not be accessible to children.

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### 5.3.1.12 Availability and Use of a Telephone or Wireless Communication Device

The facility should provide at all times at least one working non-pay telephone or wireless communication device for general and emergency use on the premises of the child care program, in each vehicle used when transporting children, and on field trips. While transporting children, drivers should not operate a motor vehicle while using a mobile telephone or wireless communications device when the vehicle is in motion or traffic.

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### 5.4.5.2 Cribs and Play Yards


Programs should only use cribs for sleep purposes and ensure that each crib is a safe sleep environment as defined by the American Academy of Pediatrics.¹⁵ Each crib should be labeled and used for the infant’s exclusive use. Cribs and mattresses should be thoroughly cleaned and sanitized before assignment for use by another child. Infants should not be placed in the cribs with items that could pose a strangulation or suffocation risk. Cribs should be placed away from window blinds or draperies.


5.5.0.8 Firearms

Center-based programs should not have firearms or any other weapon on the premises at any time. If present in a family child care home, parents should be notified and these items should be unloaded, equipped with child protective devices, and kept under lock and key with the ammunition locked separately in areas inaccessible to the children. Parents/guardians should be informed about this policy.

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5.6.0.1 First Aid and Emergency Supplies

The facility should maintain up-to-date first aid and emergency supplies in each location in which children are cared. The first aid kit or supplies should be kept in a closed container, cabinet, or drawer that is labeled and stored in a location known to all staff, accessible to staff at all times, but locked or otherwise inaccessible to children. When children leave the facility for a walk or to be transported, a designated staff member should bring a transportable first aid kit. In addition, a transportable first aid kit should be in each vehicle that is used to transport children to and from the program. First aid kits or supplies should be restocked after each use.

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Play Areas/Playgrounds and Transportation

6.1.0.6/6.1.0.8/6.3.1.1 Location of Play Areas near Bodies of Water/Enclosures for Outdoor Play Areas/Enclosure of Bodies of Water

The outdoor play area should be enclosed with a fence or natural barriers. Fences and barriers should not prevent the supervision of children by caregivers/teachers. If a fence is used, it should be in good condition and conform to applicable local building codes in height and construction. These areas should have at least two exits, with at least one being remote from the buildings.

Gates should be equipped with self-closing and positive self-latching closure mechanisms that are high enough or of a type such that children cannot open it. The openings in the fence and gates should be no larger than 3 ½ inches. The fence and gates should be constructed to discourage climbing. Outside play areas should be free from unsecured bodies of water. If present, all water hazards should be inaccessible to unsupervised children and enclosed with a fence that is 4 to 6 feet high or higher and comes within 3 ½ inches of the ground.

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6.2.3.1 Prohibited Surfaces for Placing Climbing Equipment

Equipment used for climbing should not be placed over, or immediately next to, hard surfaces not intended for use as surfacing for climbing equipment. All pieces of playground equipment should be placed over a shock-absorbing material that is either the unitary or the loose-fill type extending beyond the perimeter of the stationary equipment. Organic materials that support colonization of molds and bacteria should not be used. This standard applies whether the equipment is installed outdoors or indoors. Programs should follow CPSC guidelines and ASTM International Standards F1292-13 and F2223-10.16

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6.2.5.1 Inspection of Indoor and Outdoor Play Areas and Equipment

The indoor and outdoor play areas and equipment should be inspected daily for basic health and safety, including, but not limited to:

- a. Missing or broken parts;
- b. Protrusion of nuts and bolts;
- c. Rust and chipping or peeling paint;
- d. Sharp edges, splinters, and rough surfaces;
- e. Stability of handholds;
- f. Visible cracks;
- g. Stability of non-anchored large play equipment (e.g., playhouses);
- h. Wear and deterioration
- i. Vandalism or trash

Any problems should be corrected before the playground is used by children.

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6.3.2.1 Lifesaving Equipment

Each swimming pool more than six feet in width, length, or diameter should be provided with a ring buoy and rope, a rescue tube, or a throwing line and a shepherd's hook that will not conduct electricity. This equipment should be long enough to reach the center of the pool from the edge of the pool, kept in good repair, and stored safely and conveniently for immediate access. Caregivers/teachers should be trained on the proper use of this equipment. Children should be familiarized with the use of the equipment based on their developmental level.

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6.3.5.2 Water in Containers

Bathtubs, buckets, diaper pails, and other open containers of water should be emptied immediately after use.

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6.5.1.2 Qualifications for Drivers

In addition to meeting the general staff background check standards, any driver or transportation staff member who transports children for any purpose should have:

a. A valid driver’s license that authorizes the driver to operate the type of vehicle being driven;

b. A safe driving record for more than 5 years, with no crashes where a citation was issued, as evidenced by the state Department of Motor Vehicles records;

c. No use of alcohol, drugs, or any substance that could impair abilities before or while driving;

d. No tobacco use while driving;

e. No medical condition that would compromise driving, supervision, or evacuation capability;

f. Valid pediatric CPR and first aid certificate if transporting children alone.

The driver’s license number and date of expiration, vehicle insurance information, and verification of current state vehicle inspection should be on file in the facility.

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6.5.2.2 Child Passenger Safety

When children are driven in a motor vehicle other than a bus, all children should be transported only if they are restrained in a developmentally appropriate car safety seat, booster seat, seat belt, or harness that is suited to the child’s weight and age in accordance with state and federal laws and regulations. The child should be securely fastened, according to the manufacturer’s instructions. The child passenger restraint system should meet the
federal motor vehicle safety standards contained in 49 CFR 571.213\(^\text{17}\) and carry notice of compliance. Child passenger restraint systems should be installed and used in accordance with the manufacturer’s instructions and should be secured in back seats only.

Car safety seats should be replaced if they have been recalled, are past the manufacturer’s “date of use” expiration date, or have been involved in a crash that meets the U.S. Department of Transportation crash severity criteria or the manufacturer’s criteria for replacement of seats after a crash.

If the program uses a vehicle that meets the definition of a school bus and the school bus has safety restraints, the following should apply:

- The school bus should accommodate the placement of wheelchairs with four tie-downs affixed according to the manufactures’ instructions in a forward-facing direction;
- The wheelchair occupant should be secured by a three-point tie restraint during transport;
- At all times, school buses should be ready to transport children who must ride in wheelchairs;
- Manufacturers’ specifications should be followed to assure that safety requirements are met.

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### 6.5.2.4 Interior Temperature of Vehicles

The interior of vehicles used to transport children for field trips and out-of-program activities should be maintained at a temperature comfortable to children. All vehicles should be locked when not in use, head counts of children should be taken before and after transporting to prevent a child from being left in a vehicle, and children should never be left in a vehicle unattended.

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6.5.3.1 Passenger Vans

Early care and education programs that provide transportation for any purpose to children, parents/guardians, staff, and others should not use 15-passenger vans when avoidable.

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Infectious Disease

7.2.0.1 Immunization Documentation

Programs should require that all parents/guardians of enrolled children provide written documentation of receipt of immunizations appropriate for each child’s age. Infants, children, and adolescents should be immunized as specified in the “Recommended Immunization Schedules for Persons Aged 0 Through 18 Years,” developed by the Advisory Committee on Immunization Practices of the CDC, the American Academy of Pediatrics, and the American Academy of Family Physicians. Children whose immunizations are not up-to-date or have not been administered according to the recommended schedule should receive the required immunizations, unless contraindicated or for legal exemptions.

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7.2.0.2 Unimmunized Children

If immunizations have not been or are not to be administered because of a medical condition, a statement from the child’s primary health care provider documenting the reason why the child is temporarily or permanently medically exempt from the immunization requirements should be on file. If immunizations are not to be administered because of the parents’/guardians’ religious or philosophical beliefs, a legal exemption with notarization, waiver, or other state-specific required documentation signed by the parent/guardian should be on file.

Parents/guardians of an enrolling or enrolled infant who has not been immunized due to the child’s age should be informed if/when there are children in care who have not had routine immunizations due to exemption. The parent/guardian of a child who has not received the age-appropriate immunizations prior to enrollment and who does not have documented medical, religious, or philosophical exemptions from routine childhood immunizations should provide documentation of a scheduled appointment or arrangement to receive immunizations. Children who are in foster care or experiencing homelessness as defined by the McKinney-Vento Act should receive services while parents/guardians are taking necessary actions to comply with immunization requirements of the program. An immunization plan and catch-up immunizations should be initiated upon enrollment and completed as soon as possible.

If a vaccine-preventable disease to which children are susceptible occurs and potentially exposes the unimmunized children who are susceptible to that disease, the health department should be consulted to determine whether these children should be excluded for the duration of possible exposure or until the appropriate immunizations have been completed. The local or state health department will be able to provide guidelines for exclusion requirements.

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### 7.2.0.3 Immunization of Caregivers/Teachers

Caregivers/teachers should be current with all immunizations routinely recommended for adults by the Advisory Committee on Immunization Practices (ACIP) of the Centers for Disease Control and Prevention (CDC) as shown in the “Recommended Adult Immunization Schedule” in the following categories:

- a. Vaccines recommended for all adults who meet the age requirements and who lack evidence of immunity (i.e., lack documentation of vaccination or have no evidence of prior infection); and
- b. Recommended if a specific risk factor is present.

If a staff member is not appropriately immunized for medical, religious, or philosophical reasons, the program should require written documentation of the reason. If a vaccine-preventable disease to which adults are susceptible occurs in the facility and potentially exposes the unimmunized adults who are susceptible to that disease, the health department should be consulted to determine whether these adults should be excluded for the duration of possible exposure or until the appropriate immunizations have been completed. The local or state health department will be able to provide guidelines for exclusion requirements.

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Policies

9.2.4.1 Written Plan and Training for Handling Urgent Medical Care or Threatening Incidents

The program should have a written plan for reporting and managing any incident or unusual occurrence that is threatening to the health, safety, or welfare of the children, staff, or volunteers. Caregiver/teacher and staff training procedures should also be included. The management, documentation, and reporting of the following types of incidents should be addressed:

a. Lost or missing child;

b. Suspected maltreatment of a child (also see state’s mandates for reporting);

c. Suspected sexual, physical, or emotional abuse of staff, volunteers, or family members occurring while they are on the premises of the program;

d. Injuries to children requiring medical or dental care;

e. Illness or injuries requiring hospitalization or emergency treatment;

f. Mental health emergencies;

g. Health and safety emergencies involving parents/guardians and visitors to the program;

h. Death of a child or staff member, including a death that was the result of serious illness or injury that occurred on the premises of the early care and education program, even if the death occurred outside of early care and education hours;

i. The presence of a threatening individual who attempts or succeeds in gaining entrance to the facility.

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9.2.4.3/9.2.4.5 Disaster Planning, Training and Communication/Emergency and Evacuation Drills

Early care and education programs should consider how to prepare for and respond to emergency situations or natural disasters that may require evacuation, lock-down, or shelter-in-place and have written plans, accordingly. Written plans should be posted in each classroom and areas used by children. The following topics should be addressed, including but not limited to regularly scheduled practice drills, procedures for notifying and updating parents, and the use of the daily class roster(s) to check attendance of children and staff during an emergency or drill when gathered in a safe space after exit and upon return to the program. All drills/exercises should be recorded.
9.2.4.7 Sign-In/Sign-Out System

Programs should have a sign-in/sign-out system to track those who enter and exit the facility. The system should include name, contact number, relationship to facility (e.g., parent/guardian, vendor, guest, etc.), and recorded time in and out. [Note: Family child care is exempt.]

9.2.4.8 Authorized Persons to Pick Up Child

Children may only be released to adults authorized by parents or legal guardians whose identity has been verified by photo identification. Names, addresses, and telephone numbers of persons authorized to pick up child should be obtained during the enrollment process and regularly reviewed, along with clarification/documentation of any custody issues/court orders. The legal guardian(s) of the child should be established and documented at this time.
9.4.1.12 Record of Valid License, Certificate, or Registration of Facility or Family Child Care Home

Every facility and/or child care home should hold a valid license, certificate, or documentation of registration prior to operation as required by the local and/or state statute.

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9.4.2.1 Contents of Child Records

Programs should maintain a confidential file for each child in one central location on-site and should be immediately available to the child’s caregivers/teachers (who should have parental/guardian consent for access to records), the child’s parents/guardians, and the licensing authority upon request. The file for each child should include the following:

a. Pre-admission enrollment information;
b. Admission agreement signed by the parent/guardian at enrollment;
c. Initial and updated health care assessments, completed and signed by the child’s primary care provider, based on the child’s most recent well care visit;
d. Health history completed by the parent/guardian at admission;
e. Medication record;
f. Authorization form for emergency medical care;
g. Results of developmental and behavioral screenings;
h. Record of persons authorized to pick up child;
i. Written informed consent forms signed by the parent/guardian allowing the facility to share the child’s health records with other service providers.

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10.4.2.1 Frequency of Inspections for Child Care Centers and Family Child Care Homes

Licensing inspectors or monitoring staff should make on-site inspections to measure program compliance with health, safety, and fire standards prior to issuing an initial license and no less than one, unannounced inspection each year thereafter to ensure compliance with regulations. Additional inspections should take place if needed for the program to achieve satisfactory compliance or if the program is closed at any time. The number of inspections should not include those inspections conducted for the purpose of investigating complaints. Complaints should be investigated promptly, based on severity of the complaint. States should post results of licensing inspections, including complaints, on the internet for parent and public review. Parents/guardians should have easy access to licensing rules and made aware of how to report complaints to the licensing agency.

Sufficient numbers of licensing inspectors should be qualified to inspect early care and education programs and trained in related health and safety requirements among other requirements of the State licensure.

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This document was developed with funds from Grant # 90TA0002-01-00 for the U.S Department of Health and Human Services, Administration for Children and Families, Office of Head Start, Office of Child Care, and Health Resources and Services Administration, by the National Center for Early Childhood Quality Assurance. This resource may be duplicated for noncommercial uses without permission.
Stepping Stones to Caring for Our Children, 3rd Edition

Compliance/Comparison Checklist

Stepping Stones, Third Edition was developed to be used by multiple audiences to prevent harm and adverse outcomes in children in all early care and education settings.

Suggestions for Use of the Compliance/Comparison Checklist:

- By licensing staff who want to compare Stepping Stones standards to the subject areas covered in their state regulations and determine where there are gaps and where regulations should be added.
- By caregivers/teachers/directors who want to be sure they are complying with those standards that have the most potential to prevent harm to children in their settings.
- By families who want to be sure their child’s early care and education program is complying with these important standards.
- By child care health consultants and trainers to assess what topics need to be covered when consulting or training caregivers/teachers/directors.

**Compliance/Comparison Checklist**

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<td></td>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td><strong>Chapter 4 - Nutrition and Food Service</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.2.0.3</td>
<td>Use of USDA - CACFP Guidelines</td>
<td></td>
</tr>
<tr>
<td>4.2.0.6</td>
<td>Availability of Drinking Water</td>
<td></td>
</tr>
<tr>
<td>4.2.0.8</td>
<td>Feeding Plans and Dietary Modifications</td>
<td></td>
</tr>
<tr>
<td>4.2.0.10</td>
<td>Care for Children with Food Allergies</td>
<td></td>
</tr>
<tr>
<td>4.3.1.3</td>
<td>Preparing, Feeding, and Storing Human Milk</td>
<td></td>
</tr>
<tr>
<td>4.3.1.5</td>
<td>Preparing, Feeding, and Storing Infant Formula</td>
<td></td>
</tr>
<tr>
<td>4.3.1.9</td>
<td>Warming Bottles and Infant Foods</td>
<td></td>
</tr>
<tr>
<td>4.3.1.11</td>
<td>Introduction of Age-Appropriate Solid Foods to Infants</td>
<td></td>
</tr>
<tr>
<td>4.5.0.6</td>
<td>Adult Supervision of Children Who Are Learning to Feed themselves</td>
<td></td>
</tr>
<tr>
<td>4.5.0.9</td>
<td>Hot Liquids and Foods</td>
<td></td>
</tr>
<tr>
<td>4.5.0.10</td>
<td>Foods that Are Choking Hazards</td>
<td></td>
</tr>
<tr>
<td>4.8.0.1</td>
<td>Food Preparation Area</td>
<td></td>
</tr>
<tr>
<td>4.8.0.3</td>
<td>Maintenance of Food Service Surfaces and Equipment</td>
<td></td>
</tr>
<tr>
<td>4.9.0.2</td>
<td>Staff Restricted From Food Preparation and Handling</td>
<td></td>
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<tr>
<td>4.9.0.3</td>
<td>Precautions for a Safe Food Supply</td>
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<tr>
<td><strong>Chapter 5 - Facilities, Supplies, Equipment, and Environmental Health</strong></td>
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</tr>
<tr>
<td>5.1.1.2</td>
<td>Inspection of Buildings</td>
<td></td>
</tr>
<tr>
<td>5.1.1.3</td>
<td>Compliance with Fire Prevention Code</td>
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</tr>
<tr>
<td>5.1.1.5</td>
<td>Environmental Audit of Site Location</td>
<td></td>
</tr>
<tr>
<td>5.1.3.2</td>
<td>Possibility of Exit From Windows</td>
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</tr>
<tr>
<td>5.1.4.1</td>
<td>Alternate Exits and Emergency Shelter</td>
<td></td>
</tr>
<tr>
<td>5.1.5.4</td>
<td>Guards At Stairway Access Openings</td>
<td></td>
</tr>
<tr>
<td>5.1.6.6</td>
<td>Guardrails and Protective Barriers</td>
<td></td>
</tr>
<tr>
<td>5.2.1.1</td>
<td>Fresh Air</td>
<td></td>
</tr>
<tr>
<td>5.2.1.10</td>
<td>Gas, Oil or Kerosene Heaters, Generators, Portable Gas Stoves, and Charcoal and Gas Grills</td>
<td></td>
</tr>
<tr>
<td>5.2.1.11</td>
<td>Portable Electric Space Heaters</td>
<td></td>
</tr>
<tr>
<td>5.2.4.2</td>
<td>Safety Covers and Shock Protection Devices for Electrical Outlets</td>
<td></td>
</tr>
<tr>
<td><strong>CFOC3 Standard Number</strong></td>
<td><strong>CFOC3 Standard Title</strong></td>
<td>Compliance/Comparison</td>
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<tr>
<td>---------------------------</td>
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</tr>
<tr>
<td>5.2.4.4</td>
<td>Location of Electrical Devices Near Water</td>
<td>Yes</td>
</tr>
<tr>
<td>5.2.5.1</td>
<td>Smoke Detection Systems and Smoke Alarms</td>
<td>Yes</td>
</tr>
<tr>
<td>5.2.6.3</td>
<td>Testing for Lead and Copper Levels in Drinking Water</td>
<td>Yes</td>
</tr>
<tr>
<td>5.2.7.6</td>
<td>Storage and Disposal of Infectious and Toxic Wastes</td>
<td>Yes</td>
</tr>
<tr>
<td>5.2.8.1</td>
<td>Integrated Pest Management</td>
<td>Yes</td>
</tr>
<tr>
<td>5.2.9.1</td>
<td>Use and Storage of Toxic Substances</td>
<td>Yes</td>
</tr>
<tr>
<td>5.2.9.2</td>
<td>Use of a Poison Center</td>
<td>Yes</td>
</tr>
<tr>
<td>5.2.9.3</td>
<td>Informing Staff Regarding Presence of Toxic Substances</td>
<td>Yes</td>
</tr>
<tr>
<td>5.2.9.4</td>
<td>Radon Concentrations</td>
<td>Yes</td>
</tr>
<tr>
<td>5.2.9.5</td>
<td>Carbon Monoxide Detectors</td>
<td>Yes</td>
</tr>
<tr>
<td>5.2.9.13</td>
<td>Testing for Lead</td>
<td>Yes</td>
</tr>
<tr>
<td>5.3.1.1</td>
<td>Safety of Equipment, Materials, and Furnishings</td>
<td>Yes</td>
</tr>
<tr>
<td>5.3.1.12</td>
<td>Availability and Use of a Telephone or Wireless Communication Device</td>
<td>Yes</td>
</tr>
<tr>
<td>5.4.5.2</td>
<td>Cribs</td>
<td>Yes</td>
</tr>
<tr>
<td>5.5.0.6</td>
<td>Inaccessibility to Matches, Candles and Lighters</td>
<td>Yes</td>
</tr>
<tr>
<td>5.5.0.7</td>
<td>Storage of Plastic Bags</td>
<td>Yes</td>
</tr>
<tr>
<td>5.5.0.8</td>
<td>Firearms</td>
<td>Yes</td>
</tr>
<tr>
<td>5.6.0.1</td>
<td>First Aid and Emergency Supplies</td>
<td>Yes</td>
</tr>
<tr>
<td>5.7.0.4</td>
<td>Inaccessibility of Hazardous Equipment</td>
<td>Yes</td>
</tr>
</tbody>
</table>

**Chapter 6 - Play Areas/Playgrounds and Transportation**

<table>
<thead>
<tr>
<th><strong>CFOC3 Standard Number</strong></th>
<th><strong>CFOC3 Standard Title</strong></th>
<th>Compliance/Comparison</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.1.0.6</td>
<td>Location of Play Areas Near Bodies of Water</td>
<td>Yes</td>
</tr>
<tr>
<td>6.1.0.8</td>
<td>Enclosures for Outdoor Play Areas</td>
<td>Yes</td>
</tr>
<tr>
<td>6.2.1.9</td>
<td>Entrapment Hazards of Play Equipment</td>
<td>Yes</td>
</tr>
<tr>
<td>6.2.3.1</td>
<td>Prohibited Surfaces for Placing Climbing Equipment</td>
<td>Yes</td>
</tr>
<tr>
<td>6.2.4.4</td>
<td>Trampolines</td>
<td>Yes</td>
</tr>
<tr>
<td>6.2.5.1</td>
<td>Inspection of Indoor and Outdoor Play Areas and Equipment</td>
<td>Yes</td>
</tr>
<tr>
<td><strong>CFOC3 Standard Number</strong></td>
<td><strong>CFOC3 Standard Title</strong></td>
<td>Compliance/Comparison</td>
</tr>
<tr>
<td>---------------------------</td>
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<td>-----------------------</td>
</tr>
<tr>
<td>6.3.1.1</td>
<td>Enclosure of Bodies of Water</td>
<td>![Yes] ![No]</td>
</tr>
<tr>
<td>6.3.1.4</td>
<td>Safety Covers for Swimming Pools</td>
<td>![Yes] ![No]</td>
</tr>
<tr>
<td>6.3.1.6</td>
<td>Pool Drain Covers</td>
<td>![Yes] ![No]</td>
</tr>
<tr>
<td>6.3.2.1</td>
<td>Lifesaving Equipment</td>
<td>![Yes] ![No]</td>
</tr>
<tr>
<td>6.3.5.1</td>
<td>Hot Tubs, Spas, and Saunas</td>
<td>![Yes] ![No]</td>
</tr>
<tr>
<td>6.3.5.2</td>
<td>Water in Containers</td>
<td>![Yes] ![No]</td>
</tr>
<tr>
<td>6.4.1.2</td>
<td>Inaccessibility of Toys or Objects to Children Under Three Years of Age</td>
<td>![Yes] ![No]</td>
</tr>
<tr>
<td>6.4.1.5</td>
<td>Balloons</td>
<td>![Yes] ![No]</td>
</tr>
<tr>
<td>6.4.2.2</td>
<td>Helmets</td>
<td>![Yes] ![No]</td>
</tr>
<tr>
<td>6.5.1.1</td>
<td>Competence and Training of Transportation Staff</td>
<td>![Yes] ![No]</td>
</tr>
<tr>
<td>6.5.1.2</td>
<td>Qualifications for Drivers</td>
<td>![Yes] ![No]</td>
</tr>
<tr>
<td>6.5.2.2</td>
<td>Child Passenger Safety</td>
<td>![Yes] ![No]</td>
</tr>
<tr>
<td>6.5.2.4</td>
<td>Interior Temperature of Vehicles</td>
<td>![Yes] ![No]</td>
</tr>
<tr>
<td>6.5.3.1</td>
<td>Passenger Vans</td>
<td>![Yes] ![No]</td>
</tr>
</tbody>
</table>

**Chapter 7 - Infectious Diseases**

| **7.2.0.2** | Unimmunized Children | ![Yes] ![No] |
| **7.2.0.3** | Immunization of Caregivers/Teachers | ![Yes] ![No] |
| **7.3.3.1** | Influenza Immunizations for Children and Caregivers | ![Yes] ![No] |
| **7.3.3.2** | Influenza Control | ![Yes] ![No] |
| **7.3.5.1** | Recommended Control Measures for Invasive Meningococcal Infection in a Child Care Center | ![Yes] ![No] |
| **7.4.0.1** | Control of Enteric (Diarrheal) and Hepatitis A Virus (HAV) Infections | ![Yes] ![No] |
| **7.5.10.1** | Staphylococcus Aureus Skin Infections Including MRSA | ![Yes] ![No] |

**Chapter 9 - Policies**

<p>| <strong>9.2.3.2</strong> | Content and Development of the Plan for Care of Children and Staff Who Are Ill | ![Yes] ![No] |
| <strong>9.2.3.12</strong> | Infant Feeding Policy | ![Yes] ![No] |</p>
<table>
<thead>
<tr>
<th>CFOC3 Standard Number</th>
<th>CFOC3 Standard Title</th>
<th>Compliance/Comparison</th>
</tr>
</thead>
<tbody>
<tr>
<td>9.2.4.1</td>
<td>Written Plan and Training for Handling Urgent Medical Care or Threatening Incidents</td>
<td></td>
</tr>
<tr>
<td>9.2.4.3</td>
<td>Disaster Planning, Training and Communication</td>
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</tr>
<tr>
<td>9.2.4.5</td>
<td>Emergency and Evacuation Drills/Exercises Policy</td>
<td></td>
</tr>
<tr>
<td>9.2.4.7</td>
<td>Sign-In/Sign-Out System</td>
<td></td>
</tr>
<tr>
<td>9.2.4.8</td>
<td>Authorized Persons to Pick Up Child</td>
<td></td>
</tr>
<tr>
<td>9.4.1.10</td>
<td>Documentation of Parent/Guardian Notification of Injury, Illness or Death in Program</td>
<td></td>
</tr>
<tr>
<td>9.4.1.12</td>
<td>Record of Valid License, Certificate or Registration of Facility</td>
<td></td>
</tr>
<tr>
<td>9.4.2.6</td>
<td>Contents of Medication Record</td>
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<tr>
<td><strong>Chapter 10 - Licensing and Community Action</strong></td>
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<tr>
<td>10.4.2.1</td>
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<td></td>
</tr>
</tbody>
</table>
Stepping Stones, 3rd Edition Compliance/Comparison Checklist

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American Public Health Association
National Resource Center for Health and Safety in Child Care and Early Education

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This project was supported by Grant Number U46MCO9810 from the U.S. Department of Health and Human Services, Health Resources and Services Administration, Maternal and Child Health Bureau.

Stepping Stones, 3rd Edition (SS3) is for reference purposes only and should not be used as a substitute for medical or legal consultation, nor be used to authorize actions beyond a person’s licensing, training, or ability.

Availability

The full texts of Stepping Stones to Caring for Our Children, Third Edition and Caring for Our Children: National Health and Safety Performance Standards; Guidelines for Early Care and Education Programs, Third Edition are available online through the National Resource Center for Health and Safety in Child Care and Early Education website (http://nrckids.org/CFOC3/index.html).

Print copies of the comprehensive source document Caring for Our Children, Third Edition are available from the American Academy of Pediatrics (http://www.aap.org) and the American Public Health Association (http://www.apha.org/publications/bookstore/).
Is This The Right Place For My Child?

38 Research-Based Indicators of Quality Child Care

For additional resources or help finding your local Child Care Resource and Referral Agency call toll-free:
1-800-424-2246 | TTY: 866-278-9428 | www.ChildCareAware.org

Child Care Aware® of America
1515 N. Courthouse Road, Arlington, VA 22201
Phone (703) 341-4100  Fax (703) 341-4101 | www.usa.childcareaware.org | #1819-1008 | #121e
Is This The Right Place For My Child?

38 Research-Based Indicators of Quality Child Care
Acknowledgements

These indicators were created by building upon the Thirteen Indicators of Quality Child Care developed by Dr. Richard Fiene of The Pennsylvania State University.

About Child Care Aware®

Child Care Aware® is a program of Child Care Aware® of America. We are committed to helping parents find the best information on locating quality child care and child care resources in their community. Child Care Aware®, in partnership with local Child Care Resource and Referral agencies, builds consumer awareness and supports families in making choices for the care and education of their children. Child Care Aware® is partly funded by the Office of Child Care (OCC), Administration for Children and Families (ACF), U.S. Department of Health and Human Services.

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Choosing Child Care

Choosing care for your child while you work or attend school is one of the most important decisions you will make as a parent. Unfortunately in most areas there isn’t a “consumer report” on the best care available. Child Care Aware® of America through Child Care Aware®, helps parents find licensed care (www.childcareaware.org). Because licensing and regulations vary widely, parents need more information to make informed decisions. This guide helps parents understand how to better judge quality.

In addition, some states have quality rating systems to help parents with this decision. Parents can learn if their state has a quality rating system by visiting the QRIS National Learning Network at qrisnetwork.org. You may also contact your local Child Care Resource & Referral agency (CCR&R) for information.

The National Association for the Education of Young Children (NAEYC) provides a list of their accredited child care centers on their website, www.naeyc.org, as does the National Accreditation Commission (NAC) for Early Care and Education Programs at www.earlylearningleaders.org, and the National Early Childhood Program Accreditation (NECPA) at www.necpa.net. The National Association for Family Child Care (NAFCC) lists accredited family child care providers at www.nafcc.org. However, only a small percentage of child care programs in the United States are accredited by any organization or are part of a quality rating system.

After using these and other resources, parents should visit the programs they are considering. Included in this publication is a checklist parents can use to evaluate child care programs. This checklist is based on research on what is important to children’s health, safety and development. Following the checklist are suggested ways to find the information you are seeking. Quality programs will want you to have all the information you need to choose the best child care for your child and family. Child Care Aware® of America produced this guide to help parents with their search for quality child care.
The Quality Indicators listed in this guide are based on research about what is important in order for children to be protected and well cared for in a group child care setting. Each indicator is followed by a short explanation of why it is important. This is followed by what to look for and ask to learn if the program you are considering will be a safe, healthy and happy place for your child. The term “director” is used to refer to the person in charge of a child care center or the provider operating a family child care home. The term “program staff” is used to refer to individuals providing care in centers or family child care homes. It isn’t necessary to ask all of the questions or make all of the observations suggested; they are only provided as a resource to help you evaluate the programs you are considering for your child.

Child Care Aware® of America, is our nation’s leading voice for child care. We work with more than 400 state and local Child Care Resource and Referral agencies (CCR&Rs) to ensure that families in every community have access to quality, affordable child care. To achieve our mission, we lead projects that increase the quality and availability of child care, offer comprehensive training to child care professionals, undertake groundbreaking research, and advocate child care policies that positively impact the lives of children and families.
### Is This The Right Place For My Child?

*(Make a copy of this checklist to use with each program you visit.)*

#### Place a check in the box if the program meets your expectations.

**Will my child be supervised?**

<table>
<thead>
<tr>
<th>Question</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Are children watched at all times, including when they are sleeping?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Are adults warm and welcoming? Do they pay individual attention to each</td>
<td></td>
<td></td>
</tr>
<tr>
<td>child?</td>
<td></td>
<td></td>
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<tr>
<td>Are positive guidance techniques used?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Do adults avoid yelling, spanking, and other negative punishments?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Are the caregiver/teacher-to-child ratios appropriate and do they follow</td>
<td></td>
<td></td>
</tr>
<tr>
<td>the recommended guidelines:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>➤ One caregiver per 3 or 4 infants</td>
<td></td>
<td></td>
</tr>
<tr>
<td>➤ One caregiver per 3 or 4 young toddlers</td>
<td></td>
<td></td>
</tr>
<tr>
<td>➤ One caregiver per 4 to 6 older toddlers</td>
<td></td>
<td></td>
</tr>
<tr>
<td>➤ One caregiver per 6 to 9 preschoolers</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Have the adults been trained to care for children?**

If a center,

<table>
<thead>
<tr>
<th>Question</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Does the director have a degree and some experience in caring or children?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Do the teachers have a credential or associate degree and experience in caring for children?</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

If a family child care home:

<table>
<thead>
<tr>
<th>Question</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Has the provider had specific training on children’s development and experience caring for children?</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Question</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Is there always someone present who has current CPR and first aid training?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Are the adults continuing to receive training on caring for children?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Have the adults been trained on child abuse prevention and how to report suspected cases?</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Will my child be able to grow and learn?**

<table>
<thead>
<tr>
<th>Question</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>For older children, are there specific areas for different kinds of play (books, blocks, puzzles, art, etc.)?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>For infants and toddlers, are there toys that “do something” when the child plays with them?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Is the play space organized and are materials easy-to-use? Are some materials available at all times?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Are there daily or weekly activity plans available? Have the adults planned experiences for the children to enjoy? Will the activities help children learn?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Do the adults talk with the children during the day? Do they engage them in conversations and ask questions, when appropriate?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Do the adults read to children at least twice a day or encourage them to read, if they can do so?</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Is this a safe and healthy place for my child?**

<table>
<thead>
<tr>
<th>Question</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Do adults and children wash their hands (before eating or handling food, or after using the bathroom, changing diapers, touching body fluids, eating, etc.)?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Are diaper changing surfaces cleaned and disinfected after each use?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Do all of the children enrolled have the required immunizations?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Are medicines labeled and out of children’s reach?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Are adults trained to give medicines and keep records of medications?</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Place a check in the box if the program meets your expectations.

<table>
<thead>
<tr>
<th>Question</th>
<th>Notes:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Are cleaning supplies and other poisonous materials locked up, out of</td>
<td></td>
</tr>
<tr>
<td>children’s reach?</td>
<td></td>
</tr>
<tr>
<td>Is there a plan to follow if a child is injured, sick or lost?</td>
<td></td>
</tr>
<tr>
<td>Are first aid kits readily available?</td>
<td></td>
</tr>
<tr>
<td>Is there a plan for responding to disasters (fire, flood, etc.)?</td>
<td></td>
</tr>
<tr>
<td>Has a satisfactory criminal history background check been conducted on</td>
<td></td>
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<td>➤ Is the equipment placed on mulch, sand, or rubber matting?</td>
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<td>Is the number of children in each group limited?</td>
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<td>➤ In family child care homes and centers, children are in groups of no</td>
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<td>▪ 6-8 infants</td>
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<td>▪ 6-12 younger toddlers</td>
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<td>▪ 8-12 older toddlers</td>
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<td>▪ 12-20 preschoolers</td>
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<td>▪ 20-24 school-agers</td>
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### Is the program well-managed?

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<th>Question</th>
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<td>Does the program have the highest level of licensing offered by the state?</td>
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<td>Is the program accredited by a national organization?</td>
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### Does the program work with parents?

<table>
<thead>
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<th>Question</th>
<th>Notes:</th>
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<td>Will I be welcome any time my child is in care?</td>
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<td>Is parents’ feedback sought and used in making program improvements?</td>
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<td>Will I be given a copy of the program’s policies?</td>
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<td>Are annual conferences held with parents?</td>
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* These are the adult-to-child ratios and group sizes recommended by the National Association for the Education of Young Children. Ratios are lowered when there are one or more children who may need additional help to fully participate in a program due to a disability or other factors.

** Group sizes are considered the maximum number of children to be in a group, regardless of the number of adult staff.

*** Individuals working in child care can earn a Child Development Associate credential.

For help finding child care in your area, contact Child Care Aware®, a program of Child Care Aware® of America toll-free at 1-800-424-2246 or visit online at www.childcareaware.org.

For information about other AAP publications visit: www.aap.org
Will my child be supervised? Are children watched at all times, including when they are sleeping?  

If your child is supervised at all times he or she is less likely to be injured, as well as more likely to be engaged in activities that promote learning. It is especially important that caregivers check on infants while they are sleeping because of the risk of Sudden Infant Death Syndrome (SIDS). Also, if adults closely supervise children outdoors, children are less likely to be injured.  

➤ Observe the program staff when the children are outdoors. Do the adults stay close to the children and intervene when children engage in risky activities?  

➤ If possible, visit the program when children are resting or sleeping as well as when they are awake. During rest time are the children where the adults can see them? Do the adults check on the children frequently?  

Are adults warm and welcoming? Do they pay individual attention to each child?  

Children grow and learn when they feel cared about and comfortable. When adults pay attention to children they can respond to their individual needs, extend their learning, engage them in activities, and offer materials and information.  

Observe the adults:  

➤ Do they smile and talk to you? Do they smile and talk to your child? How do they act with the other children?  

➤ Do they interact with individual children as well as the group of children?  

➤ Do they respond when children make requests?  

➤ Do they offer materials and information to extend children’s play?  

➤ Do they encourage and support children’s efforts?  

➤ Do they comfort children who need to be comforted?
Are positive guidance techniques used? Do adults avoid yelling, spanking, and other negative punishments? 

Children learn how to behave through adult example and encouragement. Positive guidance techniques include:

➤ Setting limits for the child. “Keep the paint on the paper.”
➤ Giving reasons for rules and limits. “If you eat lunch now you won’t be hungry later.”
➤ Changing something about the situation. For example, moving a breakable item out of a toddler’s reach.
➤ Ignoring behavior when it is appropriate to do so. For example, not responding when a child whines for something he or she wants.
➤ Redirecting the child’s behavior. “Ride your bike on the path, not on the grass.”
➤ Using consequences. “If you leave the paint out you won’t be able to use it tomorrow.”

Yelling, spanking, and other negative punishments provide a bad example for children and may harm the child in other ways.

➤ Ask the program director to see the program’s guidance policies. Look for prohibitions against negative punishments and examples of positive techniques such as those listed above.
➤ Observe the program staff to see what techniques they use when children misbehave. Watch for use of negative punishments (yelling, hitting, twisting arms, ridiculing, criticizing, threatening, etc.). Expect to see the positive techniques listed above.
➤ Ask the program staff, “What do you do when children don’t follow the rules?” and “What do you do when children misbehave?” and “How are children punished when they don’t behave?”
➤ Ask the program staff, “How is time out used?” Expect to hear that time out is used to help children relax, not as a punishment.

When each adult is responsible for fewer children, your child can be provided with more one-on-one attention. Attention is crucial to your child’s social and emotional development. It also helps adults get to know your child and plan activities based on his or her learning needs and interests. (In some states, programs are allowed to have each adult care for more children while the children are asleep or resting.)

Ask the program director, “How many children is each adult responsible for?” Compare his or her answer to the information above.

➤ Observe to see how many children each adult is providing care for during the day.

Is the number of children in each group limited?

In child care centers, children are in groups of no more than:

➤ Six to eight infants
➤ Six to 12 younger toddlers
➤ Eight to 12 older toddlers
➤ Twelve to 20 preschoolers
➤ Twenty to 24 school-age children

Small group sizes ensure your child will receive one-on-one attention and is part of a group that is easier to manage. Small group sizes are particularly important for young children who need more individual attention and can become overwhelmed in large groups.

➤ Ask the program director how many children are in each group. Compare the answers to the information above.
➤ Observe to see the size of the groups in which children receive care. Compare the group sizes to the information above.
➤ If the group in which your child will receive care includes one or more children with special needs, look to see if the program has adjusted the number of children in the group so that all of the children’s needs are met.

Have the adults been trained to care for children?

If a center:

➤ Does the director have a degree and some experience in caring for children?
➤ Do the teachers each have a credential or associate degree and experience in caring for children?
If a family child care home:

➤ Has the provider had specific training on children’s development and experience caring for children? Staff education is the best predictor of the quality of an early childhood program. Adults with training in early childhood education provide higher quality programs for your child, implement more appropriate activities, and do a better job of preparing your child for school.

Managing a child care program is a challenging task that requires both early childhood and business management knowledge. Experience putting this knowledge to work enhances the child care program’s quality.

Experience helps adults gain knowledge of early childhood programs and effective strategies for caring for and educating your child. Experience, combined with training and education, increases the quality of early childhood programs.

➤ Ask the center director, “Do you have a college degree?” and “What field is your degree in?” Listen for early childhood education, child development or a related field.

➤ Ask the center director, “How much experience do you have managing a child care program?”

➤ Ask the center director, “How many staff members do you have? How many of them have a degree in early childhood education or a related field? How many of them have an associate degree in early childhood education or a related field? How many of them have their CDA (Child Development Associate credential)?

➤ Ask the family child care provider, “How much training have you had in early childhood education? Did the training include information on the development of children’s social and emotional behavior, thinking, and language?” and “How many years of experience do you have providing child care?”

Is there always someone present who has current CPR and first aid training? If adults are trained in emergency first aid and infant/toddler CPR they will know how to handle medical emergencies and react appropriately in case your child has a medical emergency.

➤ Ask the program director, “Who in the program has current certification in CPR and first aid?” and “Is there always someone on duty in the program with current certification in CPR and first aid?”

➤ Check the program’s job descriptions to find out if certification in CPR and first aid are required.

➤ Ask to see copies of the program staff’s or provider’s first aid and CPR cards.
Are the adults continuing to receive training on caring for children?

If the adults caring for your child continue to receive training, they will know new information about how to protect your child’s health and safety, for example, how to reduce the incidence of Sudden Infant Death Syndrome (SIDS). They will also know how to promote children’s development, for example, the newest research on how children learn to read and write.

➤ Ask the program staff, “When was the last time you attended training on early childhood education?”
➤ Ask the program director, “Are staff required to attend training each year?” and “Are staff funded to attend training each year?”
➤ Review the program’s annual training plan to find out how much training staff members or providers receive each year.

Will my child be able to grow and learn?

For children age 3 and older, are there specific areas for different kinds of play (books, blocks, puzzles, art materials, etc.)?

Your child will learn different concepts and skills in different interest areas (blocks, books, puzzles, art materials, music, science and math). Interest areas that are organized and orderly will help your child make choices about what to play with and where to put materials away. The areas may have different names such as library (instead of books), manipulatives (instead of puzzles), construction (instead of blocks), etc. In a family child care home the areas may be set up each day or left permanently in place.

➤ Look to see if there are areas with different kinds of toys and materials. Expect to see an area with books, art materials, blocks and other construction toys such as trucks, and puzzles and other small manipulatives such as Legos. You may also see a science and math area and a music area.
➤ Check to see if the areas include a variety of toys and other materials.
➤ Ask the program staff, “How often do you add new materials to the areas or rotate the materials in the

Have the adults been trained on child abuse prevention and how to report suspected child abuse?

Caregivers who are trained in identifying and reporting child abuse will know how to respond if they suspect a child has been mistreated.

➤ Ask the program staff, “Have you been trained on how to identify and report child abuse?” and “If you suspect a child has been abused, who would you report it to?”
➤ Ask the program director, “Are the staff and volunteers trained on how to identify and report child abuse?” and “What is included in this training?”
areas?" Expect new or different materials will be added at least monthly.

➤ In a family child care home, look to see that infants and toddlers are protected from small items that could cause choking.

For infants and toddlers, are there toys that "do something" when the child plays with them? 41

Infants are interested in looking at toys, touching them with their hands and mouth, fitting pieces of things together, and making sense of their world.

Infants need brightly colored toys of many textures. They need toys to look at, feel, chew on, hold, and drop. As they begin to walk or crawl they enjoy push-pull toys and balls.

In the second year of life, toddlers have the physical skills that make it easier for them to play and learn. Busy toddlers need toys for physical play – walking, climbing, pushing and riding – and ones that encourage experimentation and manipulation.

For infants, look to see if the program has:

➤ Balls
➤ Grasping toys
➤ Stacking and nesting toys
➤ Toys to look at, feel, and chew on

For toddlers, look to see if the program has:

➤ Equipment for climbing
➤ Riding toys
➤ Balls
➤ Large interlocking blocks and puzzles
➤ Water and sand for sensory play

Is the play space organized and are materials easy to use? Are materials available at all times? 21

If the play areas are organized and orderly your child will be able to make choices about what materials to play with and will be able to put toys away after playing with them.

Look for:

➤ Materials organized by type (blocks, puzzles, dolls, art materials, dress-up clothes, etc.).

➤ Spaces and containers labeled with a picture or drawing of the materials.

➤ Overall organization. If you were a child wanting to play dress-up or wanting to do a puzzle, would you know where to look?

➤ Accessibility. Are some materials available at all times and easy for children to reach?

Are there daily or weekly activity plans available? Are there planned experiences for the children to enjoy? Will the activities help children learn? 22

Children benefit when adults plan activities for them. If the daily activities reflect your child’s interests and needs it increases the likelihood your child will benefit from the experiences. He or she will also benefit more if the activities are ones they enjoy and are planned to help them learn and develop. If the program plans a variety of activities it increases the potential that all of the children’s needs will be met.

➤ Ask to see the program’s daily or weekly plans. Check to see if the plans include a variety of activities – art, music, outdoor play, reading, dramatic play, science, and math.

➤ Ask the program director, “Do you have a planned curriculum? If so, what is it?”

➤ Look to see if the children seem to be enjoying the activities that are being offered and are actively engaged in them.

➤ Ask the program staff, “How do you decide which activities to offer?” Expect to hear the activities are based on the children’s interests and needs.

Do the adults talk with children during the day? Do they engage them in conversation? Do they ask questions, when appropriate?

Adults can help promote children’s language development by talking with them during the day. Research has shown that early exposure to language leads to greater language skills as children grow older. The more caregivers and parents talk to children while they are caring for and playing with them, the more effectively children will learn to communicate.

Observe the adults with the children:

➤ Do they talk with babies and toddlers while they are handling daily routines?
➤ Do they turn babies' sounds into words?
➤ Do they provide words to help children label things?
➤ Do they encourage toddlers to use words?
➤ Do they add words to expand children's vocabulary?
➤ Do they engage preschoolers and older children in conversations?
➤ Do they avoid asking older children questions to which the adult already knows the answer?

Do the adults read to children at least twice a day or encourage them to read, if they can do so?

Reading aloud provides children with sounds to imitate and helps them develop phonemic awareness (the ability to hear sounds) – an important prereading skill. Reading also helps build children's vocabulary and increases their understanding of feelings, objects, and events. When adults read to them, children get the message that reading is important. A child's reading skills are important for success in school and life.

➤ Ask the program staff, “How often do you read to the children?” Expect to hear “at least twice day” or more. Sometimes programs read books but don't include it on the schedule.

➤ Look around for children's books. If few or no books are available, it may be a sign that reading is not valued by the program.

Is this a safe and healthy place for my child? Do adults and children wash their hands (before eating or handling food and after using the bathroom, changing diapers, touching bodily fluids, or eating)?

Germs can be passed easily from child to child. Washing hands often and well reduces the chance that germs will be passed along and that your child will get sick.

➤ Observe the adults. Do they wash the children's hands and their hands after using the bathroom, changing diapers, before serving foods, after handling animals, etc.?

➤ Are hand-washing signs posted in center bathrooms?

➤ Are the supplies (water, soap, paper towels) needed for hand-washing near sinks and diaper-changing areas?

➤ Ask the program staff “When do you wash your hands during the day?” and “When do you wash the children's hands?”

Are the diaper-changing surfaces cleaned and sanitized after each use?

Germs can be passed easily among children, particularly at the diaper-changing table. Cleaning and disinfecting the diaper-changing surface after each change reduces the chance that germs will be transmitted and your child will get sick.

➤ Observe the adults. Do they clean and sanitize the diaper-changing surface with a bleach water solution and a disposable towel after changing each child?

➤ Is the surface used for changing diapers easy to sanitize? Couches, beds, etc. cannot be easily sanitized.

➤ Are the supplies (bleach water solution/paper towels) needed to clean and sanitize the diaper-changing table located near the area, but not where children can reach them?

➤ Ask the program staff, “What procedures do you follow during diaper changing to keep children healthy?” Listen for evidence that they sanitize the diaper-changing surface.

Do all the children enrolled have the required immunizations?

Children who are up-to-date on their immunizations are less likely to get or pass along diseases. When all the children in a program are healthy this reduces the risk of your child getting sick.

➤ Ask the program staff, “Which immunizations do you require children to have?”

➤ Check to be sure that the program requires children to have the immunizations recommended by the Advisory Committee on Immunization Practices (ACIP). If you want to know what those immunizations are, visit www.cdc.gov.

➤ Ask the program staff, “How does the program keep track of whether or not children have the required immunizations?”
➤ Are medicines labeled and out of children’s reach? 7

This will help your child receive the right medication at the right time in the right amount and prevent your child from receiving someone else’s medication by accident. Children can be harmed by ingesting other children’s medications or too much of any medication.

Are adults trained to give medicines and keep records of medications? 9

Caregivers should be trained in how to read labels on medicines and how to give medicine to children. This will help ensure your child receives medicines when needed and does not receive medicines that are not needed. Children can be harmed by ingesting other children’s medications or too much of any medication.

➤ Ask the program director, “Does the staff receive training on giving medicines?”

➤ Ask the program staff, “Do you give prescription medicines?” and “Do you require a doctor’s directions to give prescription medicines?” and “Do you give non-prescription medicines?” and “Do you require a parent’s approval to give non-prescription medicines?”

➤ Observe to see if staff members make a written record when they give a child a medicine.

Are cleaning supplies and other poisonous materials locked up, out of children’s reach? 8

Accidental poisoning is a leading cause of injury and death among young children. Many cleaning supplies are poisonous when ingested in any amount. Storing all hazardous substances out of reach will ensure your child is not harmed.

➤ Observe where cleaning supplies and other poisonous materials are stored. Are they stored where children cannot reach them?

➤ Check to see if the janitor’s closets are locked. Most of them contain supplies that would be dangerous to children.

➤ Look to see that cleaning supplies and food are not stored together. Storing food and cleaning supplies together can result in accidental poisoning.

➤ Ask the program staff, especially the janitor and cooks, “How do you keep children away from poisonous materials?”

Is there a plan to follow if a child is injured, sick or lost? 9

Child care programs with emergency plans respond better when an emergency arises. The program should have information on each child in care so the parents or another trusted individual can be contacted if a child becomes injured, sick or lost. The staff should be trained on how to contact emergency medical services and the police.
➤ Ask the program staff, “What would you do if my child was injured or became ill?” Expect to hear they would contact you and know how to contact emergency medical services.

➤ Ask the program staff, “What would you do if my child was missing?” Expect to hear they would contact the police immediately before starting to search and contacting you.

➤ Be sure the program has a phone. Check near the phones to see if the numbers for fire, police, and emergency medical services are listed.

➤ Ask the program director, “What information do you collect so you are prepared to handle emergencies involving my child?” Expect to hear they collect your home, cell, and work phone numbers and backup phone numbers from other people you would trust to make decisions about your child.

Are first-aid kits readily available?  

If your child gets hurt, having first aid supplies nearby will ensure he or she gets basic medical attention more quickly.

➤ Ask to see the program’s first aid kit. Some programs keep a kit in each room; some have a kit in the office.

➤ Check to see if the kit contains items such as first aid instructions; disposable, non-porous gloves; soap or hydrogen peroxide; tweezers; bandage tape; sterile gauze; scissors; a baby-safe thermometer; etc.

Is there a plan for responding to disasters (fire, flood, etc.)?  

An emergency plan that is practiced regularly will increase the likelihood that caregivers and children will act appropriately in an emergency. Programs should have an emergency plan and the staff and children should practice it regularly.

The plan should be practiced during different times of the day, especially when children are sleeping, eating, and outside. The program’s plan should include what to do during the types of disasters (hurricanes, tornadoes, winter storms, etc.) most often experienced in the area, as well as terrorist attacks.

➤ Ask the program staff, “What would you do if there was a fire?” Expect to hear that they would evacuate the children from the facility and then call 9-1-1.

➤ Look to see if there are two ways out of most areas. Check to see if the paths to exit the facility in an emergency are posted in each room in a center and at least one place in a family child care home.

➤ Ask the program director to see the program’s emergency plan. Check to see if it includes information on the types of weather events experienced in the area.

➤ Ask the program staff, “Do you practice for emergencies like a fire?” and “How often do you involve the children in these practices?” and “What types of weather events are you prepared for?”

➤ Ask the program staff, “What would you do if there was a terrorist attack?”

Has a satisfactory criminal history background check been conducted on each adult present? Was the check based on fingerprints?  

Having adults with favorable background checks helps ensure people with criminal backgrounds are not caring for your child, reducing the risk of child abuse. These checks are more valid if they are based on fingerprints. Sometimes these checks take some time to be processed; adults who have not had their background check returned should always be closely supervised by someone who has been cleared. Checks should be completed on all adults who have contact with children including bus drivers, janitors, clerks, etc.

➤ Ask the program director, “Is a criminal history background check conducted on all staff and volunteers and adult family members (if a family child care home)?” and “Are the checks based on fingerprints?”

➤ Ask the program director, “Are adults allowed to be alone with children while you are waiting for their background check to be completed?” and “How will you ensure my child will not be alone with someone without a completed background check?”

➤ Ask the program director, “Are there any adults around the program who have been arrested or convicted of a crime involving violence or children?”

Have all the adults who are left alone with children had background and criminal screenings?  

The rare occasions when abuse occurs in child care centers typically happen when caregivers are left alone with children. Making sure center caregivers can be seen at all times greatly reduces this risk. In family child care homes the provider often will be alone with the children. The greater risk in homes is when other family members or visitors are left alone with children.

➤ In centers, look to see that at least two adults are with each group of children most of the time.
➤ Ask the program director, “What precautions do you take to reduce the potential for child abuse in your program?” Expect to hear that the program avoids having one adult alone with children whenever possible.

➤ In family child care homes, ask the provider, “Will my child ever be left alone with your family members or guests?” Expect to hear this would only occur in an emergency or if a family member is an approved and trained substitute.

Is the outdoor play area a safe place for children to play?

➤ Is it checked each morning for hazards before children use it?23

➤ Is the equipment the right size and type for the age of the children who use it?24

➤ Is the outdoor area surrounded by a fence or other barrier at least 4 feet tall if there is traffic or there are other hazards nearby?25

➤ Is the equipment in good condition?26

➤ Is the equipment placed on mulch, sand, or rubber mats?27

The most common place for children to be injured is on the playground or in the yard.

If there is traffic or there are other hazards near the outdoor area there should be a barrier at least 4 feet high surrounding the area. The barrier could be a fence, hedge, or other protection.

If the outdoor area is checked daily for broken glass, metal pieces, etc., cuts and other injuries can be avoided. Children can also be injured if the play equipment is broken or splintered or missing important parts.

Most injuries on playgrounds occur when children fall. Children can get hurt if they fall from play equipment that is too high or has handholds, steps or other parts that are too big for them. Having soft surfaces under play equipment cushions the child’s fall. The materials used to cushion children’s falls should be 9 to 12 inches deep.

➤ Walk around the outdoor area; look for broken glass, metal pieces, or other debris that could injure a child. Check the equipment for missing or broken parts that could result in children falling. If there is traffic or if there are other hazards nearby, is there a fence or other barrier to protect children from injury? Is the barrier high enough to keep children inside?

➤ Check the playground equipment. Is it the right size for your child? Does it have impact-altering materials under it? Are the materials 9 to 12 inches deep? Are the materials still in place where the slide ends, where children drag their feet when swinging, and in other high-use areas?

➤ Ask the program director, “How often is the outdoor area and equipment checked?” and “When is the cushioning material under the outdoor equipment replenished?”

Is the program set up to promote quality?

➤ Ask the program director, “Is this program licensed by the state?” If it isn’t licensed ask, “Why isn’t it licensed?” If the answer is that the program isn’t required to be licensed, ask “Have you considered becoming licensed anyway?”

➤ Ask the program director, “Has this program received the highest quality rating given by the state?” If the answer is “no,” ask “Why didn’t the program receive the highest quality rating?” The answer may be that the state doesn’t offer quality ratings.

Are there written personnel policies and job descriptions?17

Written personnel policies and job descriptions reflect a program’s professionalism and expectations of staff. Written policies also help staff know what is expected of them, resulting in programs running more effectively.

➤ Ask to see a center’s personnel policies and job descriptions for staff.

➤ In a family child care home, ask to see the personnel policies and job descriptions for any assistants and substitutes.
Are parents and staff asked to evaluate the program?  

Child care programs should regularly seek ways to improve the quality of the care they offer. Asking parents and staff for feedback and using the results to make improvements shows the program is responsive to your and other parents’ input.

➤ Ask the program director, “Do you ask the parents how the program could be improved?” and “Do you ask the staff how the program should be improved?”

➤ Ask the program staff, “Are you asked to provide input on how the program could be improved?”

➤ Ask other parents, “Are you asked to provide input on how well the program is doing?”

➤ Ask to see the results of any surveys parents and staff have been asked to complete.

Are staff evaluated each year? Do providers do a self-assessment?  

Annual evaluations provide feedback to staff on their performance and provide an opportunity for staff to identify areas of strength and areas for improvement.

This feedback can improve job performance, enhancing the overall operation of the program.

➤ Ask the program director, “Are staff evaluated each year?” and “Are the results of staff evaluations shared with the individual staff members?”

➤ Ask family child care providers, “Do you do a self-assessment each year?” and “How do you use the results of the self-assessment?”

➤ Ask program staff, “Are you evaluated each year?” and “Are the results of your annual evaluation shared with you?”

Is there a written annual training plan for staff professional development?  

A written training plan individualized for each staff member or provider helps adults get the training they need to do the best job possible of educating and caring for your child.

➤ Ask to see the center’s training plan for staff professional development. Check to see that staff members are provided opportunities to continue to learn about how to help children develop and learn.

➤ Ask the family child care provider to see his or her training plan for the year. Check to see that he or she plans to participate in training on how to help children develop and learn.

➤ Ask program staff, “Is there a written annual training plan for professional development?” and “Is the plan followed?”

Is the program evaluated each year by someone outside the program?  

Having an outside “pair of eyes” look at the child care program each year helps ensure it will be a quality place for your child. Someone who is not in the program every day can spot health or safety hazards missed by those who are there every day. Outside evaluators can also offer suggestions on how to improve the program and make it a better place for children to grow and learn.

➤ Ask the program director, “How often are you inspected by the state?” and “Are you visited by any other outside group?”

➤ If the program has been inspected in the last year, ask “What were the results of your latest inspection?”

Is the program accredited by a national organization?  

National accreditation is a process that typically requires self-study, feedback from families, and a validation visit by an outside organization. Participating in this process increases program quality. The stamp of approval of an outside organization means the program has received feedback on its performance by an outside entity. Accrediting agencies include the National Association for the Education of Young Children, National Association for Family Child Care, Council on Accreditation, National Early Childhood Program Accreditation and National Accreditation Commission for Early Care and Education Programs.

➤ Ask the program director, “Is this program accredited?” If the program is not accredited, ask “Why hasn’t the program sought accreditation?” and “Does the program plan to become accredited?”

➤ Look for a certificate or other display indicating that the program is accredited.
Does the program work with parents? Will I be welcome any time my child is in care?

As a parent you should always feel welcome in the program. You should always have access to your children where they are receiving care at any time. Programs may recommend that you not visit during rest time or other specific times, but you should be able to visit during those times if you choose to do so.

➤ Ask the program director, “Will I be able to visit the program at all times?”
➤ Ask other parents, “Are you able to visit the program whenever you want to?”

Is parents’ feedback sought and used in making program improvements?

Your input should be welcome. Programs have the needs of many different families to balance, but you should always feel listened to and encouraged to express your opinions.

➤ Ask other parents, “Is parent input asked for and accepted?”
➤ Ask the program director, “How does the program get input from parents?” and “What are some examples of changes that have been made based on parent input?”

Will I be given a copy of the program’s policies?

Well-managed programs operate using a set of policies and procedures. This information may be made available to parents in a parent handbook. This usually means the program has thought through the needs and interests of parents and will be more responsive to their needs.

➤ Ask to see a copy of the program’s policies.
➤ Ask for a copy of the program’s parent handbook.
➤ Ask parents, “Have you been given a copy of the program’s policies?”
➤ Ask the program director, “Will I be given a copy of the program’s policies?”

Are annual conferences held with parents? Are parents involved in other ways?

Parent conferences allow you to visit with your child’s teacher or caregiver in a focused way to talk about your child’s development and progress and to share goals. These conferences can be invaluable for establishing relationships and developing shared plans for educating and caring for your child. Staff and providers should talk with parents about their child’s day and how to ease transitions between home and child care and child care and school.

➤ Ask the program director, “Are parent conferences held?” and “How often?”
➤ Ask the program staff, “Do you have planned conferences with parents?”
➤ Ask other parents, “Are annual conferences held with parents?”
➤ Ask the program director, “How will the person caring for my child keep me informed about my child’s day?”
➤ Ask the program director, “What will the program do to help my child adjust to child care?” and “What will the program do to help my child transition to school?”
Bibliography


Is This The Right Place For My Child?

38 Research-Based Indicators of Quality Child Care

For additional resources or help finding your local Child Care Resource and Referral Agency call toll-free:
1-800-424-2246 | TTY: 866-276-9428 | www.ChildCareAware.org

Child Care Aware® of America
1515 N. Courthouse Road, Arlington, VA 22201
Phone (703) 341-4100  Fax (703) 341-4101 | www.usa.childcareaware.org | #1819-1008 | #121e
# A Parent’s Guide to Choosing Safe and Healthy Child Care

## Medications
- ✔ Does the child care program keep medication out of reach from children?
- ✔ Are the caregivers trained and the medications labeled to make sure the right child gets the right amount of the right medication at the right time?

## Staff Training/First Aid
- ✔ Have caregivers been trained how to keep children healthy and safe from injury and illness?
- ✔ Do they know how to do first aid and rescue breathing?
- ✔ Have they been trained to understand and meet the needs of children of different ages?
- ✔ Are all child care staff, volunteers, and substitutes trained on and implementing infant back sleeping and safe sleep policies to reduce the risk of SIDS (Sudden Infant Death Syndrome, crib death)?

*Hint:* When infants are sleeping, are they on their backs with no pillows, quilts, stuffed toys, or other soft bedding in the crib with them?

## Playgrounds
- ✔ Is the playground inspected for safety often?
- ✔ Is the playground surrounded by a fence?
- ✔ If there is a sandbox, is it clean?
- ✔ Is the playground equipment safe, with no sharp edges, and kept in good shape?
- ✔ Are the soil and playground surfaces checked often for dangerous substances and hazards?
- ✔ Is equipment the right size and type for the age of children who use it?

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If you would like more information on the research of Dr. Richard Fiene that supports these health and safety guidelines, please visit these websites: [http://nrc.uchsc.edu](http://nrc.uchsc.edu); [http://aspe.hhs.gov](http://aspe.hhs.gov). The research paper, *13 Indicators of Quality Child Care: Research Update*, is available on the Web at [http://aspe.hhs.gov/hsp/ccquality-ind02](http://aspe.hhs.gov/hsp/ccquality-ind02). This Parent’s Guide can be downloaded from the Internet at: [http://aspe.hhs.gov](http://aspe.hhs.gov) and [http://nrc.uchsc.edu](http://nrc.uchsc.edu).

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**Produced by:**
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University Of Colorado Health Sciences Center at Fitzsimons
Campus Mail Stop F541, PO Box 6508, Aurora, CO 80045 - 0508
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**Supported by:**
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Health Resources and Services Administration
A Parent’s Guide to 
Choosing Safe and Healthy Child Care

More and more, research tells us that our children’s healthy development depends on safe and positive experiences during the first few years of life. If you are a parent who works during these early years, choosing good child care is one of the most important decisions you will ever make for your child.

To help you make the right choice for your child, researchers have identified 13 guidelines to think about when choosing a child care program.

You might want to visit several different child care programs, either centers or family child care homes, before you decide which one is best for your family. Call each child care program and schedule an appointment for your visit. Once you are there, stay for at least an hour to watch activities, check the surroundings, and ask questions. This form provides a place for you to note which guidelines are met; the checklist below provides a place where you can make notes on up to 3 different child care programs. Research shows that if a program follows guidelines, it is more likely to be a safe and healthy place for your child.

Considering these guidelines can help you find a place where you can feel comfortable leaving your child.

**Supervision**
- ✔ Are children supervised at all times, even when they are sleeping?
- ✔ How do the caregivers discipline children?
  Hint: Discipline should be positive, clear, consistent, and fair.

**Handwashing and Diapering**
- ✔ Do all caregivers and children wash their hands often, especially before eating and after using the bathroom or changing diapers?
- ✔ Is the place where diapers are changed clean?
- ✔ Do caregivers always keep a hand on the child while diapering?
- ✔ Do caregivers remove the soiled diaper without dirtying any surface not already in contact with stool or urine?
- ✔ Do caregivers clean and sanitize the surface after finishing the changing process?
  Hint: Hands should be scrubbed with soap and water for at least 10 seconds and then rinsed and dried. The water faucet should be turned off with a paper towel.

**Director Qualifications**
- ✔ Does the director of a child care center have a bachelor’s degree in a child-related field?
- ✔ Has the director worked in child care for at least 2 years?
- ✔ Does the director understand what children need to grow and learn?

**Lead Teacher Qualifications**
- ✔ Does the lead teacher in a child care center have a bachelor’s degree in a child-related field?
- ✔ Has the teacher worked in child care for at least 1 year?
- ✔ Does the teacher give children lessons and toys that are right for their ages?

**Child:Staff Ratio and Group Size**
- ✔ How many children are being cared for in the child care program?
- ✔ How many caregivers are there?
  Hint: Your child will get more attention if each caregiver has fewer children to take care of. The younger the children are, the more caregivers there should be. For example, one family home caregiver should only take care of two babies.

**Immunizations**
- ✔ Is your child up-to-date on all of the required immunizations?
- ✔ Does the child care program have records proving that the other children in care are up-to-date on all their required immunizations?

**Toxic Substances**
- ✔ Are toxic substances like cleaning supplies and pest killers kept away from children?
- ✔ Has the building been checked for dangerous substances like radon, lead, and asbestos?
- ✔ Is poison control information posted?

**Emergency Plan**
- ✔ Does the child care program have an emergency plan if a child is injured, sick, or lost?
- ✔ Does the child care program have first aid kits?
- ✔ Does the child care program have information about who to contact in an emergency?

**Fire Drills**
- ✔ Does the child care program have a plan in case of a disaster like a fire, tornado, flood, blizzard, or earthquake?
- ✔ Does the child care program do practice drills once every month?

**Child Abuse**
- ✔ Can caregivers be seen by others at all times, so a child is never alone with one caregiver?
- ✔ Have all caregivers gone through a background check?
- ✔ Have the caregivers been trained how to prevent child abuse, how to recognize signs of child abuse, and how to report suspected child abuse?
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Supported by:
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FY 2016 Office of Head Start
HSKI-C Monitoring Protocol
Overview

The Office of Head Start (the OHS) presents the FY 2016 Head Start Key Indicator-Compliance (HSKI-C). The HSKI-C is an evidence-based tool that identifies whether grantees qualify for differential monitoring. Grantees that qualify for and pass the HSKI-C will receive an Environmental Health & Safety (EnvHS) Review and a CLASS® Review over their 5-year grant period. Grantees that do not qualify for the HSKI-C or are not successful with the HSKI-C Review will receive comprehensive monitoring, which includes a Fiscal Integrity and ERSEA Review, Comprehensive Services and School Readiness Review, and Leadership, Governance, Management Systems Review.

The OHS will look at the following criteria to identify grantees that are eligible for the HSKI-C review: a compliant review with no additional findings since the last monitoring cycle; no fiscal findings in the last two monitoring cycles; not meeting any DRS criteria, including CLASS; and a history of clean annual audits. In addition, the Regional Office will provide input to determine the grantee’s eligibility for differential monitoring. The HSKI-C Protocol is an indicator tool designed only to determine whether a grantee needs to undergo the Comprehensive Monitoring process. As a result, the HSKI-C Protocol will not be used to identify findings. Findings would be identified through the Comprehensive Monitoring Process.

Following the HSKI-C Review event, the OHS will send a letter to the grantee indicating whether the HSKI-C Review was successful. In order to be considered successful, the grantee must be successful for all 27 Key Indicators in the HSKI-C Protocol. Grantees that are not successful in the HSKI-C Review event will move to the Comprehensive Monitoring process, while those that are successful will move to the Differential Monitoring process. Note that the HSKI-C letter will inform the grantee of the overall results of the HSKI-C review; however, it will not indicate the area or areas in which issues were identified. The HSKI-C tool is designed to identify the path for subsequent monitoring events for each grantee and is not intended to identify findings. Grantees can learn more about both the Comprehensive and Differential Monitoring processes by visiting the Aligned Monitoring System training modules and reviewing the materials posted in the Virtual Expo.

Organization of the Protocol

Content Areas

The HSKI-C Protocol is used to gather information to assess grantee performance across the following content areas:

- Fiscal Integrity
- Leadership and Governance
- Management Systems
- Comprehensive Services and School Readiness, which includes Child Health & Safety, Family & Community Engagement, and Child Development & Education
**Fiscal Integrity.** The Fiscal Integrity section of the HSKI-C Protocol focuses on assessing whether the program maintains effective financial management systems, timely and complete financial records, signed and approved time records, and necessary and reasonable non-Federal-share (NFS) contributions, as well as complete and accurate equipment records.

**Leadership and Governance.** For Leadership and Governance, the HSKI-C Protocol guides the Reviewer in assessing the composition of the Policy Council, training and technical assistance provided to the governing body and the Policy Council, the extent to which the governing body fulfills its responsibilities regarding program administration and operations, and the effectiveness of the program’s reporting to the governing body and the Policy Council.

**Management Systems.** The HSKI-C Protocol’s Management Systems section enables the OHS to assess the effectiveness of the program’s annual Self-Assessment, its practices and system for ongoing monitoring of program services and operations, and the program’s system for maintaining up-to-date and accurate records. The Management Systems section also guides the assessment of several aspects of the program’s Human Resources function, including its establishment of standards of conduct and process for ensuring all staff abide by the standards and the program’s completion of criminal record checks for its staff. A final focus of this section is on the publication and availability of the Annual Report to the Public.

**Comprehensive Services & School Readiness.** This section of the HSKI-C Protocol guides the review of the grantee’s delivery of comprehensive, individualized services to children, pregnant women, and families. Comprehensive Services & School Readiness includes:

- **Child Health & Safety:** An assessment of whether and how the grantee establishes each child’s health status and provides follow-up and referral as required.
- **Family & Community Engagement:** An assessment of how the grantee educates parents in order to promote positive parent-child relationships and makes Mental Health services available to support parents and staff. Also, this section assesses the grantee’s partnerships with Local Education Agencies (LEAs) and other Part C agencies that support services to children and their families.
- **Child Development & Education:** An assessment of the grantee’s system used to track and report on school readiness goals, the grantee’s use of an evidence-based curriculum, and the individualization of services to meet children’s specific needs.

**Key Indicators**
The HSKI-C Protocol is composed of a series of Key Indicators. (Key Indicators are the specific statements that ground the HSKI-C review.)

**Targeted Questions**
Targeted Questions (TQs) for each Key Indicator are designed to provide guidance to on-site Reviewers and ensure a standardize method for evidence collection. TQs indicate questions to ask within interviews, information to retrieve from documents, and observations to conduct. Reviewers are required to answer all TQs for each Key Indicator.
Guides

The HSKI-C Protocol contains organizing tools called Guides. In the OHS Monitoring System (OHSMS) software, the Guides align the TQs according to the method of collecting information while on site. The Guides pull together all the TQs related to a particular method and source of evidence collection (e.g., Policy Council Interview, Staff File Review). The responses to each TQ in a Guide are linked to the appropriate Key Indicator.

HSKI-C Reviewers use the following Guides:

- Interviews
- Staff file review
- Document review

In the OHSMS software, the Guides and HSKI-C Protocol are customized to reflect the type of program being reviewed (e.g., center-based, Family Child Care, home-based, and migrant) and the types of children or populations served by the program (e.g., infants and toddlers, preschool-age children, and pregnant women and new mothers).
Head Start Key Indicator-Compliant (HSKI-C) #1

Program Governance

<table>
<thead>
<tr>
<th>Key Indicator</th>
<th>Federal Regulation</th>
</tr>
</thead>
<tbody>
<tr>
<td>The program has established a Policy Council elected by parents of currently enrolled children whose membership is composed of a majority of parents of children currently enrolled in the program as well as members of the community served by the Head Start agency.</td>
<td>642(c)(2)(B)(i)</td>
</tr>
<tr>
<td></td>
<td>642(c)(2)(B)(ii)(I)</td>
</tr>
<tr>
<td></td>
<td>642(c)(2)(B)(ii)(II)</td>
</tr>
</tbody>
</table>

*Note: Applies to grantees only*

Targeted Questions

Policy Council—Interview

- Ask the Policy Council to describe the composition of its membership and share relevant documentation that confirms that the Policy Council has the appropriate composition, and members are elected.

Does the Policy Council membership meet the following requirements?

- At least 51 percent of the members are parents of children currently enrolled in the Head Start program (including delegate agencies).
- At least one member is from the at-large community served by the program or any delegate agency.
- Members are elected by parents of children currently enrolled in the program.

Ask the program to provide the documents needed and review them with you to confirm the Policy Council’s membership.
Program Governance

<table>
<thead>
<tr>
<th><strong>Key Indicator</strong></th>
<th><strong>Federal Regulation</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Members of the governing body and the Policy Council receive appropriate training and technical assistance to ensure that they understand the information they receive and can provide effective oversight of, make appropriate decisions for, and participate in programs of the Head Start agency.</td>
<td>642(d)(3)</td>
</tr>
</tbody>
</table>

*Note: Applies to grantees only*

Targeted Questions

Policy Council—Interview

► Ask the program to provide you with documentation of Policy Council training, (e.g., Policy Council meeting agendas and minutes), which you will review with staff while discussing this item.

Ask the Policy Council members to describe the training they received and provide examples of how the training has helped them make decisions about the Head Start program.

Governing Body—Interview

► Ask the program to provide you with documentation of governing body training, (e.g., governing body meeting agendas and minutes), which you will review with staff while discussing this item.

Ask the governing body members to describe the training received and provide examples of how the training has helped them make decisions about the Head Start program.
Head Start Key Indicator-Compliant (HSKI-C) #3

Program Governance

<table>
<thead>
<tr>
<th>Key Indicator</th>
<th>Federal Regulation</th>
</tr>
</thead>
<tbody>
<tr>
<td>The governing body is responsible for required activities and makes decisions pertaining to program administration and operations, including selecting delegates and service areas; establishing procedures and criteria for recruitment, selection, and enrollment; reviewing all applications for funding; and establishing procedures for selecting Policy Council members.</td>
<td>642(c)(1)(E)(iv)(I) 642(c)(1)(E)(iv)(II) 642(c)(1)(E)(iv)(III) 642(c)(1)(E)(iv)(VI)</td>
</tr>
</tbody>
</table>

Targeted Questions

Governing Body—Interview

- Ask the governing body members to explain their role in program planning and to provide specific examples. Did the governing body play a role in:
  - Establishing procedures and criteria for recruiting, selecting, and enrolling children?
  - Selecting delegate agencies, as appropriate?
  - Developing procedures for selecting Policy Council members?
  - Reviewing applications for funding and amendments to applications for funding?
Head Start Key Indicator-Compliant (HSKI-C) #4

Program Governance

<table>
<thead>
<tr>
<th>Key Indicator</th>
<th>Federal Regulation</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Policy Council approves and submits decisions about identified program</td>
<td>642(c)(2)(A)</td>
</tr>
<tr>
<td>activities to the governing body.</td>
<td>642(c)(2)(D)(i)</td>
</tr>
<tr>
<td>Note: Applies to grantees only</td>
<td>642(c)(2)(D)(ii)</td>
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<tr>
<td></td>
<td>642(c)(2)(D)(iii)</td>
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<td></td>
<td>642(c)(2)(D)(iv)</td>
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<td>642(c)(2)(D)(vii)</td>
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<tr>
<td></td>
<td>642(c)(2)(D)(viii)</td>
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</tbody>
</table>

Targeted Questions

Policy Council—Interview

► Ask the Policy Council members to describe their involvement in and provide examples of decisions made in the areas listed below.

Is the Policy Council actively involved in the following?

- Activities to support the active involvement of parents in supporting program operations, including policies to ensure that the Head Start program is responsive to community and parent needs
- Program recruitment, selection, and enrollment priorities
- Applications for funding and amendments to applications for funding
- Budget planning for program expenditures, including policies for reimbursement related to and participation in Policy Council activities
- Developing by-laws for the operation of the Policy Council
- Program personnel policies and decisions regarding the employment of program staff consistent with 642(c)(1)(E)(iv)(IX) and including standards of conduct for program staff, contractors, and volunteers and criteria for the employment and dismissal of program staff
- Developing procedures for how members of the Policy Council of the Head Start program are elected
- Providing recommendations on the selection of delegate agencies and the service areas for such agencies
- Program design and operations
- Planning goals and objectives
Head Start Key Indicator-Compliant (HSKI-C) #5

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<tr>
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<th>Federal Regulation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Governing body and Policy Council members regularly receive and use</td>
<td>642(d)(2)(A)</td>
</tr>
<tr>
<td>information or reports about program planning, policies, and operations,</td>
<td>642(d)(2)(B)</td>
</tr>
<tr>
<td>including:</td>
<td>642(d)(2)(C)</td>
</tr>
<tr>
<td>• Monthly financial statements (including credit card expenditures),</td>
<td>642(d)(2)(D)</td>
</tr>
<tr>
<td>program information summaries, program enrollment reports</td>
<td>642(d)(2)(E)</td>
</tr>
<tr>
<td>(including attendance reports for children whose care is partially</td>
<td>642(d)(2)(F)</td>
</tr>
<tr>
<td>subsidized by another public agency), and reports of meals and snacks</td>
<td>642(d)(2)(G)</td>
</tr>
<tr>
<td>provided through U.S. Department of Agriculture (USDA) programs</td>
<td>642(d)(2)(H)</td>
</tr>
<tr>
<td>• The annual financial audit, Self-Assessment (including findings related</td>
<td>642(d)(2)(I)</td>
</tr>
<tr>
<td>to such assessment), and Program Information Report (PIR)</td>
<td></td>
</tr>
<tr>
<td>• The community-wide strategic planning and needs assessment</td>
<td></td>
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<tr>
<td>(Community Assessment) of the Head Start agency, including applicable</td>
<td></td>
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<tr>
<td>updates</td>
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<tr>
<td>• Communication and guidance from the Secretary</td>
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</tbody>
</table>

Note: Applies to grantees only. Single or multiple reports may be used to capture the information listed above.

Targeted Questions

Policy Council—Interview

► Ask the Policy Council members how often they receive the reports listed below. Discuss whether the reports provided to the Policy Council contain the information needed to provide effective oversight.

Document whether the Policy Council receives the following reports as often as required:

Annual reports

• The financial audit
• The Self-Assessment, including any related findings
• The Program Information Report (PIR)

Monthly Reports

• Financial statements, including credit card expenditures (if the program uses credit cards)
• Program information summaries
Policy Council—Interview (continued)

Monthly Reports (continued)
- Program enrollment reports, including attendance reports for children whose care is partially subsidized by another public agency
- Reports of meals and snacks provided through programs of the U.S. Department of Agriculture (USDA)

Additional reports
- Every 3 years, the community-wide strategic planning and needs assessment (Community Assessment) of the Head Start agency
- Applicable current updates from the Secretary (i.e., Program Instructions, Information Memoranda, etc.)

Ask the members whether the reports they received contributed useful and timely information to support the Policy Council’s decision-making. If the reports are of poor quality and cannot be used by the Policy Council, capture that in your notes.

Governing Body—Interview

► Ask the governing body members how often they receive the reports listed below. Document whether the governing body receives the following reports as often as required.

Annual reports
- The financial audit
- The Self-Assessment, including any related findings
- The Program Information Report (PIR)

Monthly Reports
- Financial statements, including credit card expenditures (if the program uses credit cards)
- Program information summaries
- Program enrollment reports, including attendance reports for children whose care is partially subsidized by another public agency
- Reports of meals and snacks provided through programs of the USDA

Additional reports
- Every 3 years, the community-wide strategic planning and needs assessment (Community Assessment) of the Head Start agency
- Applicable and current updates from the Secretary (i.e., Program Instructions, Information Memoranda, etc.)
Management Systems

<table>
<thead>
<tr>
<th>Key Indicator</th>
<th>Federal Regulation</th>
</tr>
</thead>
<tbody>
<tr>
<td>At least annually, the program conducts a Self-Assessment of program</td>
<td>641A(g)(1)</td>
</tr>
<tr>
<td>effectiveness that:</td>
<td>641A(g)(2)(B)</td>
</tr>
<tr>
<td>• Assesses progress in meeting local program goals and objectives</td>
<td></td>
</tr>
<tr>
<td>• Evaluates program compliance with Federal requirements</td>
<td></td>
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<tr>
<td>• Results in improvement plans</td>
<td></td>
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</tbody>
</table>

Targeted Questions

Head Start/Early Head Start Director—Interview/Debrief

► With the Director, review the program’s Self-Assessment. Discuss the process the program uses to conduct the Self-Assessment, including:

• How frequently it is conducted
• How the program evaluates progress toward program goals
• How improvement plans are developed
Management Systems

<table>
<thead>
<tr>
<th>Key Indicator</th>
<th>Federal Regulation</th>
</tr>
</thead>
<tbody>
<tr>
<td>The program established and implements procedures for the ongoing monitoring of its operations and services to ensure compliance. The program's ongoing monitoring: • Uses effective tools and procedures to ensure the program is in compliance and meets its goals and objectives • Clearly defines staff roles and responsibilities in program oversight • Conducts frequent, ongoing monitoring activities • Collects and uses data for planning activities and to ensure compliance • Ensures ongoing monitoring in delegate agencies takes place</td>
<td>641A(g)(3)</td>
</tr>
</tbody>
</table>

Targeted Questions

Head Start/Early Head Start Director—Interview/Debrief

► How does the program:
  • Use effective tools and procedures to ensure it is in compliance and meets its goals and objectives?
  • Clearly define staff roles and responsibilities in program oversight?
  • Conduct frequent ongoing monitoring activities?
  • Collect and use data for planning activities and to ensure compliance?
  • Ensure ongoing monitoring of delegate agencies takes place?

Health Services Coordinator—Interview

► How do you:
  • Monitor your program area to ensure high-quality services are being delivered to all children and families?
  • Define staff roles and responsibilities in monitoring your program area?
  • Collect and use data for planning activities and to change practices as needed?
Management Systems

<table>
<thead>
<tr>
<th>Key Indicator</th>
<th>Federal Regulation</th>
</tr>
</thead>
<tbody>
<tr>
<td>The program develops and implements written standards of conduct that are available to all staff and contain provisions for appropriate penalties when violations occur.</td>
<td></td>
</tr>
<tr>
<td><strong>Note:</strong> 1304.52(i)(1)(iii) was removed from this section and is now located in CHS 5.5.</td>
<td>1304.52(i)(1)</td>
</tr>
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<td></td>
<td>1304.52(i)(1)(i)</td>
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<td></td>
<td>1304.52(i)(1)(ii)</td>
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<tr>
<td></td>
<td>1304.52(i)(1)(iv)</td>
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<td></td>
<td>1304.52(i)(3)</td>
</tr>
</tbody>
</table>

Targeted Questions

**Head Start/Early Head Start Director—Interview/Debrief**

► Ask the Director to describe how the program informs staff about the standards of conduct. What policies and procedures does the program have in place to ensure that the standards are followed?

If there were any violations of the program’s standards of conduct, talk to the Director about such violations and determine what penalties were applied.
Management Systems

<table>
<thead>
<tr>
<th>Key Indicator</th>
<th>Federal Regulation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prior to employing an individual, the program obtains a:</td>
<td>648A(g)(3)(A)</td>
</tr>
<tr>
<td>• Federal, State, or Tribal criminal record check (CRC) covering all jurisdictions in which it provides Head Start services to children</td>
<td>648A(g)(3)(B)</td>
</tr>
<tr>
<td>• Federal, State, or Tribal CRC as required by the law of the jurisdiction in which the program provides Head Start services</td>
<td>648A(g)(3)(C)</td>
</tr>
<tr>
<td>• CRC as otherwise required by Federal law</td>
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</tbody>
</table>

Targeted Questions

Staff File Review

► Did the program obtain one of the following for the employee?
  • A State, Tribal, or Federal criminal record check (CRC) covering all jurisdictions in which the grantee provides Head Start services to children
  • A State, Tribal, or Federal CRC as required by the law of the jurisdiction in which the grantee provides Head Start services
  • A CRC as otherwise required by Federal law

► Was the employee hired within the last 12 months?

► Was the CRC conducted prior to employment?

Head Start/Early Head Start Director—Interview/Debrief

► If any staff members did not have a CRCs or were hired within the last 12 months and did not complete CRCs prior to hire, talk to the Head Start Director regarding the policies in place and determine why checks were not completed and what, if any, steps will be taken to correct the issue.
Head Start Key Indicator-Compliant (HSKI-C) #10

Management Systems

<table>
<thead>
<tr>
<th>Key Indicator</th>
<th>Federal Regulation</th>
</tr>
</thead>
<tbody>
<tr>
<td>The program establishes and maintains a record-keeping system that supports</td>
<td>1304.51(g)</td>
</tr>
<tr>
<td>the delivery of services to children and families. The program:</td>
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<tr>
<td>• Consistently collects and records data in an accurate and timely manner</td>
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<td>for children, families, and staff</td>
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<tr>
<td>• Generates reports to inform planning, communication, and ongoing monitoring</td>
<td></td>
</tr>
<tr>
<td>• Makes information accessible to appropriate parties</td>
<td></td>
</tr>
<tr>
<td>• Maintains confidentiality</td>
<td></td>
</tr>
</tbody>
</table>

Targeted Questions

Child File Review

Head Start/Early Head Start Director—Interview/Debrief

▸ With the Head Start Director, discuss the program’s record-keeping system.
  • What data system does the program use?
  • How does the program ensure that the data are accurate and up to date? (e.g., ERSEA data, children kept up to date)
  • In what ways does the program use its data?
  • How does the program ensure data are kept confidential?
Management Systems

<table>
<thead>
<tr>
<th>Key Indicator</th>
<th>Federal Regulation</th>
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<tbody>
<tr>
<td>The program publishes and makes available to the public an Annual Report that contains:</td>
<td>644(a)(2)</td>
</tr>
<tr>
<td>• An explanation of the budgetary expenditures and proposed budget for the fiscal year</td>
<td>644(a)(2)(B)</td>
</tr>
<tr>
<td>• An explanation of the agency's efforts to prepare children for kindergarten</td>
<td>644(a)(2)(G)</td>
</tr>
</tbody>
</table>

Targeted Questions

Head Start/Early Head Start Director—Interview/Debrief

► With the Director, review the program’s Annual Report. Discuss how the Annual Report is made public. Describe the information included in the report, including:

• An explanation of budgetary expenditures and proposed budget for the fiscal year
• Information on school readiness and how the grantee works to prepare children for kindergarten
Fiscal Integrity

<table>
<thead>
<tr>
<th><strong>Key Indicator</strong></th>
<th><strong>Federal Regulation</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>The grantee’s financial management systems provide for effective control over and accountability for grant and sub-grant funds, property, and other assets and ensure they are used solely for authorized purposes.</td>
<td>75.302(b)(4-5) 75.501(b) 75.352(d)(1-3) 75.352(f) 75.352(g)</td>
</tr>
</tbody>
</table>

Targeted Questions

Delegate Agency—Document Review

- Does the grantee have one or more delegate agencies?
- How does the grantee use information in the audits and other information from delegate agencies—such as claims for reimbursement, support documentation, bank statements, and advance payment requests—for monitoring?
- Are recommendations discussed with the delegate agencies and corrective actions developed?
- How does the grantee ensure corrective actions occurred?
- If delegate agencies receive advance payments, how is the amount determined, and does the grantee recover the advanced amounts by the end of the grant year?
- What documentation is included with the requests for payment, and how are the requests processed?

Financial Reports/Accounting Records—Document Review

- Review grantee correspondence and notices from the Internal Revenue Service, State Income Tax, State Tax Withholding, Workers’ Compensation, and Unemployment Compensation documents. Does any correspondence indicate unresolved compliance issues, such as unpaid amounts that were past due; material significant penalties for late, missing, or incomplete returns; or reports? If yes, describe all unresolved issues in detail and indicate the amount of any levies, taxes, payments, penalties, and interest claimed by the authority.
If a review of grantee correspondence and notices from the Internal Revenue Service, State Income Tax, State Tax Withholding, Workers’ Compensation, and Unemployment Compensation documents revealed there were unresolved issues with late payroll taxes or late insurance premiums, can the agency document that no portion of the taxes or insurance premiums was related to the Head Start program?

Are there amounts due but not remitted (e.g., unpaid taxes or insurance premiums)? If yes, did the grantee draw down funds from the payment management system (PMS) for the unremitting taxes or premiums?

What method does the program use to ensure that funds are available for payment of any vested accrued leave owed to employees of the grantee?

What is the program’s procedure for reviewing credit card charges/retail-store credit charges to ensure that only authorized signatories use agency credit cards and that charges are reasonable and necessary for program operations?

Since the completion of the most recent audit, have there been significant changes in Fiscal staffing or the financial systems? If so, how has any potential negative impact associated with these changes been mitigated?

Is the grantee current with processing transactions, payments to vendors, and production of financial reports for staff, the Board, and the Policy Council? Please describe the evidence you observed in arriving at your conclusion.

What are your and your staff’s experience and educational levels?

Is the staffing level adequate to provide for appropriate segregation of duties? Please describe the evidence you observed in arriving at your conclusion.

Is the agency current in its payments to the Internal Revenue Service and State tax authorities (significant amounts not remitted when due and/or significant penalties, interest, or levies related to late filings or late remittance)? Please describe the evidence you observed in arriving at your conclusion.
General Ledger—Document Review

► Review a report or listing of aged payables. Are bills and invoices paid on time (not more than 30 days past due unless disputed)?

► Review two consecutive bank statements. Are bank statements reconciled to the General Ledger? Are reconciling items (including outstanding checks) resolved within 30 days? Do checks clear the bank by the second statement after the issue date?

► If the reconciliations show any checks outstanding more than 60 days, can the grantee show that payments were disbursed (checks signed and issued to the payees) on or near the date on which the checks were written?

► Do the grantee’s fiscal records differentiate development and administrative costs from program costs to ensure that development and administrative costs do not exceed 15 percent of the total grant (unless a waiver granting a higher percentage has been received)?

Non-Personnel Costs—Transaction Review

► How did the grantee ensure services were performed or goods received before the payment was processed? Please describe the evidence you observed in arriving at your conclusion.

► Was the cost supported by a contract or an invoice, if appropriate? Please describe the evidence you observed in arriving at your conclusion.

► Was the cost posted to the appropriate award period?

► Are approvals of the documents supporting this transaction consistent with the approval process described in the organization’s Fiscal Policies and Procedures? Is the approver someone other than the person making the order? Was a purchase order completed (if required by the organization’s policies and procedures)? Please describe the evidence you observed in arriving at your conclusion.

► If payment was made by check, has the check cleared the bank? If not, does the grantee maintain documentation to demonstrate the payment was disbursed (check written, signed, and issued to the vendor)? Please describe the evidence you observed in arriving at your conclusion.

► Is credit card use consistent with the organization’s written policies? Please describe the evidence you observed in arriving at your conclusion.
FIFO & Audit—Document Review

► Are there unresolved audit findings that should be considered by the Reviewer?
► Does the most recent audit include audit findings either directly or indirectly related to the Head Start program?
► Do audit reports disclose any companies related to the grantee organization providing services and/or facilities to the Head Start program?
► Does the latest audit report describe potential impairment of financial health or significant issues outside of audit findings that should be considered by the Reviewer?
► Are there specific issues involving key personnel that should be considered by the Reviewer?
► Did the Regional Office list any other issues that should be considered by the Reviewer?

Procurement—Transaction Review

► Were the grantee’s written procurement procedures followed (use of purchase orders, approvals, documentation of cost quotations, etc.)?
► How did the grantee ensure the services were performed or the goods received before the payment was processed?
► Are approvals of the documents supporting this transaction consistent with the approval process described in the organization’s fiscal policies and procedures? Is the approver someone other than the person making the order? Was a purchase order completed (if required by the organization’s policies and procedures)?
► If the payment was made by check, has the check cleared the bank? If not does the grantee maintain documentation to demonstrate the payment was disbursed (check written, signed and issued to the vendor)?
► Is credit card use consistent with the organization’s written policy?
Fiscal Integrity

<table>
<thead>
<tr>
<th>Key Indicator</th>
<th>Federal Regulation</th>
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</thead>
<tbody>
<tr>
<td>Financial reports and accounting records are timely and complete and contain accurate information pertaining to grant or sub-grant awards, authorizations, obligations, unobligated balances, assets, liabilities, outlays (total expenditures), income, and interest. Reports include: • SF-425 (paper-based Federal Financial Report filed with Regional Office); • SF-425 (web-based Federal Cash Transactions Report filed with Division of Payment Management); and • USDA/Child and Adult Care Food Program (CACFP) reports.</td>
<td>1304.23(b)(1)(i)</td>
</tr>
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<td></td>
<td>1304.51(h)</td>
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<td></td>
<td>75.302(b)(2)</td>
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<td></td>
<td>75.302(b)(3)</td>
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</tbody>
</table>

Targeted Questions

Financial Reports/Accounting Records—Document Review

► Using the most recent Final SF-425 and financial records, document the following and identify whether there is a difference among amounts recorded in the financial records, amounts reported on the audit, and amounts reported on the SF-425.

► Has the grantee reconciled any differences between the amounts recorded in the financial records and amounts reported on the SF-425?

► Describe any unreconciled differences and discuss with the Fiscal Officer.

► Did disbursements for the latest award reported on the most recent PMS report (the SF-425 submitted electronically each quarter) vary from the disbursements reflected in the grantee’s financial records? Describe any differences and discuss with the Fiscal Officer.

► Did the grantee’s accounting records separately identify the source and application for each Head Start award: Federal awards, authorizations, unobligated balances, assets, liabilities, outlays (total expenditures), income, and interest?

► Is the total recipient share (NFS) in the grantee’s financial records at least as much as the amount shown on the most recent Final SF-425? Please describe the evidence you observed in arriving at your conclusion.

► Were any USDA/CACFP claims reduced or rejected due to late or inaccurate reporting or improper documentation of costs, resulting in a disallowance or reduced payment to the program?
Compare the actual USDA revenue reported in the paper-based Final SF-425 filed with the budgeted amount of USDA revenue reflected on the Grant Application Budget Instrument (GABI) and ask the grantee to document the total food costs for the Head Start program and show the sources from which the food costs were paid. Based on your review of this documentation, was Head Start charged for food costs that should have been paid by the USDA?

Does the grantee’s most current USDA/CACFP compliance review identify any areas of noncompliance related to fiscal issues? If yes, did USDA/CACFP disallow any costs?

Based on your review of the grantee’s repayment of costs disallowed by the USDA, were Head Start funds used to pay the disallowance?

Based on your review of the grantee’s records, was it determined that the USDA removed the grantee from participation in the CACFP program?
# Head Start Key Indicator-Compliant (HSKI-C) #14

## Fiscal Integrity

<table>
<thead>
<tr>
<th>Key Indicator</th>
<th>Federal Regulation</th>
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</thead>
</table>
| Original time records are prepared and properly signed by the individual employee and approved by a responsible supervisory official, and an appropriate methodology was used to allocate salaries among Head Start and other programs. | 220, App A(C)(4)(a)  
220, App A(J)(10)(a)  
220, App A(J)(10)(b)  
220, App A(J)(10)(d)  
225, App A(C)(3)(a)  
225, App B(8)(h)(1)  
225, App B(8)(h)(3)  
225, App B(8)(h)(4)  
230, App A(A)(4)(a)(2)  
230, App B(8)(m)(1)  
230, App B(8)(m)(2) |

## Targeted Questions

### Payroll—Transaction Review

- Is the transaction part of a payroll approved by a responsible official of the organization?
- Is the transaction supported by time and attendance records (e.g., timecards, timesheets, summary records, or other supporting documentation verifying attendance) and signed or electronically approved by the employee or a supervisor having first-hand knowledge of the actual work performed by the employee?
- Which of the following best describes the allocation of this position?
  - The position is allocated 100% to Head Start or 100% to Early Head Start (EHS).
  - The position is allocated only between Head Start and EHS.
  - The position is allocated between Head Start/EHS and a related program, such as Child Care or State Pre-K.
  - The allocation includes an unrelated program and/or Central Administration.
- Which of these best describes the allocation between Head Start/EHS and unrelated programs and/or Central Administration?
  - The allocation between Head Start/EHS and unrelated programs and/or Central Administration is based on actual activity.
• The allocation between Head Start/EHS and unrelated programs and/or Central Administration is based on budgeted dollars, ability to pay, or fixed percentages not supported by a rationale.
• The allocation between Head Start/EHS and unrelated programs and/or Central Administration is supported by an activity base (e.g., number of transactions, number of supervised staff).
• The grantee uses another allocation methodology not described above.

► Which of these best describes the allocation between Head Start/EHS and related program(s), such as State Pre-K or Child Care?
  o The allocation is based on actual activity.
  o The allocation base (e.g., total salary dollars in each program, total expenses in each program) typically requires a Negotiated Indirect Cost Rate Agreement.
  o The allocation methodology uses one or more activity bases, such as the number of children served, hours of operation, or a time study or similar analysis based on direct hours of identifiable services provided.

► Which of these best describes the allocation between Head Start and EHS?
  • The allocation between Head Start and EHS uses the same percentages as those used in the GABI accompanying the approved funding application.
  • The allocation is based on actual activity.
  • The allocation is based on budgeted dollars, ability to pay, historical time studies, or fixed percentages not supported by a rationale.
  • The allocation is supported by an activity base (e.g., hours of service, number of children, etc.).
  • The grantee uses another allocation methodology not described above.

► How has the grantee documented actual activity?
  • The grantee is an educational institution and uses a method recognizing the principle of after-the-fact confirmation.
  • The grantee is a government entity and uses periodic certification demonstrating (at least semi-annually) that the employee worked solely under the Head Start/EHS award during the period covered by the certification.
  • The grantee is a non-profit or government entity and uses personnel activity reports (PARs).

► Were the PARs prepared at least monthly, and did they coincide with one or more pay periods?

► Did the PAR account for the total activity for which the employee was compensated?
Payroll—Transaction Review (continued)

► Was the PAR signed by the individual employee or, for non-profit agencies only, by a responsible supervisory official having first-hand knowledge of the activities performed by the employee?

► Is the allocation supported by current data?

► Based on a review of available information (e.g., job description, organization chart, classroom rosters, list of programs served by the agency), is the salary properly allocated? Please describe the evidence supporting your conclusion.

► Is the allocation base an appropriate measure of the benefit received by each program? Please describe the evidence you observed in arriving at your conclusion.

► If the grantee uses another allocation methodology, please describe the allocation methodology used. Does the methodology allocate costs in proportion to the benefits received by each program? Please describe the evidence observed in arriving at your conclusion.
Head Start Key Indicator-Compliant (HSKI-C) #15

Fiscal Integrity

<table>
<thead>
<tr>
<th>Key Indicator</th>
<th>Federal Regulation</th>
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<tbody>
<tr>
<td>The grantee can demonstrate that all contributions of non-Federal share (NFS),</td>
<td>75.306(b)(1-5)</td>
</tr>
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<td>including cash and third-party in-kind (such as donated services, goods or</td>
<td>75.306(e)</td>
</tr>
<tr>
<td>supplies), are necessary and reasonable for accomplishing program objectives,</td>
<td>75.306(g)</td>
</tr>
<tr>
<td>allowable under applicable cost principles, and allocable if also benefiting</td>
<td>75.306(i)(1-3)</td>
</tr>
<tr>
<td>another award. Financial records are also sufficient and support the</td>
<td>75.434(d)</td>
</tr>
<tr>
<td>verification of adherence to applicable cost principles.</td>
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Targeted Questions

FIFO & Audit—Document Review

► Any there any issues related to NFS that should be considered by the Reviewer?

Non-Federal Share—Transaction Review

► Was the cash expended for allowable costs necessary and reasonable for the operation of the Head Start program?

► This question applies only if cash match was from State or local government funds. Has the grantee established that the claimed match is not from funds paid by the Federal Government under another award, except where authorized by Federal statute, or the funds were not used to match other Federal funds? Please describe the evidence you observed in arriving at your conclusion.

► Does the grantee administer other programs that require a match?

► How did the grantee establish that the donation has not been counted toward a match for another program? Please describe the evidence you observed in arriving at your conclusion.

► For cash matches, was the cash counted as match when expended and not when received? Please describe the evidence you observed in arriving at your conclusion.

► Does the claimed NFS appear to be allowable and necessary for the operation of the Head Start program?

► Were donated items intended to be taken home for personal use by the child or parent (e.g., clothing, household items)? Please describe the evidence you observed in arriving at your conclusion.
Was the claimed match from funds paid by the Federal Government under another award?

Did authorizing legislation allow the funds to be used as a match? Please describe the evidence you observed in arriving at your conclusion.

How was value established, and is it reasonable? Is the rate consistent with the rates paid for similar services in the recipient’s organization (including fringe benefits) or the employee’s regular rate of pay (for services provided by the employee of another organization) or, for services not found within the recipient’s organization, consistent with the rates paid for similar services in the local labor market (including fringe benefits)? Please describe the evidence you observed in arriving at your conclusion.

For donated services, is the nature and duration of the activity, service date, location in which the service was performed, and volunteer signature included in the documentation? Please describe the evidence you observed in arriving at your conclusion.

If applicable to the type of donated service, are claims supported by records identifying the number of children served and the services provided?

Did the volunteer receive payment or a stipend from another Federal program, such as Foster Grandparents?

Was the value reduced by the amount of the stipend? Please describe the evidence you observed in arriving at your conclusion.

For donated space (other than space in family homes or occasional space rental), is the claimed value supported by a current appraisal performed by a licensed independent appraiser (e.g., certified real-property appraiser or General Services Administration representative) and certified by a responsible official of the recipient? Please describe the evidence you observed in arriving at your conclusion.

Is the rate consistent with the rates paid for similar services in the recipient’s organization (including fringe benefits), or, for services not found within the recipient’s organization, consistent with the rates paid for similar services in the local labor market (including fringe benefits)? Please describe the evidence you observed in arriving at your conclusion.

Is the amount of time spent performing the activities reasonable? Please describe the evidence you observed in arriving at your conclusion.

Does in-kind primarily benefit the parent or child (as outlined in OHS-PC-A-077) as opposed to benefiting the overall Head Start program?
This question applies to at-home activities. Are parents’ at-home activities related to doing things with the enrolled child that support the child’s Head Start experience as articulated by the teacher (or home visitor) and support the curriculum used by the program? Please describe the evidence you observed in arriving at your conclusion.

This question applies to claims for the use of parent in-home space. Did the grantee use an outside source (e.g., market survey) to support the claimed value? Please describe the evidence you observed in arriving at your conclusion.

Does this claim include parent transportation of children?
Head Start Key Indicator-Compliant (HSKI-C) #16

Fiscal Integrity

<table>
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<tr>
<th>Key Indicator</th>
<th>Federal Regulation</th>
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<tbody>
<tr>
<td>The grantee has safeguarded equipment purchased using Head Start funds by maintaining complete and accurate equipment records, verifying the accuracy of records by conducting a physical inventory, and following disposition requirements. The grantee obtained advance Regional Office permission for any encumbrance of equipment acquired using Head Start funds.</td>
<td>75.320(d)(1-2)</td>
</tr>
<tr>
<td></td>
<td>75.320(a)(2)</td>
</tr>
<tr>
<td></td>
<td>75.320(e)</td>
</tr>
</tbody>
</table>

Targeted Questions

Equipment—Transaction Review

► Does the total cost of all equipment purchased with Head Start funds exceed $50,000?

► Is the equipment supported by an entry in the grantee's equipment records, including all required information (description of the property; serial number or other identification number; source of the property; title holder; acquisition date; cost of the property; percentage of Federal participation in the cost of the property; location, use, and condition of the property; and ultimate disposition data, including date of disposal and sales price of the property)?

► Can the grantee document that the equipment was part of a physical inventory conducted at least once in the past 2 years?

Financial Reports/Accounting Records—Document Review

► Since the last review, has the grantee sold or disposed of any equipment with a fair-market value of $5,000 or more?

► How did the grantee determine the fair-market value? Please describe the evidence you observed in arriving at your conclusion.

► Did the grantee request and follow disposition instructions from the Regional Office?

Loan Review—Transaction Review

► If the loan agreement did not exclude assets having a Federal interest from use as collateral, did the grantee receive written approval from the Grants Management Officer (or designee) to encumber the Federal interest in Head Start equipment?
Comprehensive Services & School Readiness

<table>
<thead>
<tr>
<th>Key Indicator</th>
<th>Federal Regulation</th>
</tr>
</thead>
<tbody>
<tr>
<td>The program has established procedures for tracking the provision of Health services.</td>
<td>1304.20(a)(1)(ii)(C)</td>
</tr>
</tbody>
</table>

Targeted Questions

Health Services Coordinator—Interview

- With the coordinator, review the program’s health-tracking system. Ask how often the system is updated and which staff are responsible for keeping it up to date. Does the system include all necessary information, including information on:
  - Medical services?
  - Dental health services?
  - Mental Health services?
  - Nutrition services?
For all of the above types of services, does the tracking system include:
  - Dates of services?
  - Types of screenings, assessments, and referrals?
  - Results and outcomes?
- When reviewing the tracking system, confirm that the information in the system aligns with the information documented in the child files. Look at a sample of information for 10 children to ensure the data align. Clearly document any discrepancies in the data observed and ask program staff to clarify why the data in the different sources may be different.
Comprehensive Services & School Readiness

<table>
<thead>
<tr>
<th><strong>Key Indicator</strong></th>
<th><strong>Federal Regulation</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>The program ensures that a Health staff member visits each newborn within 2 weeks after birth to ensure both the mother’s and the child’s well-being.</td>
<td>1304.40(i)(6)</td>
</tr>
</tbody>
</table>

*Note: Applies only to programs serving pregnant women and new mothers*

Targeted Questions

Health Services Coordinator—Interview

- Ask the Health Services Coordinator how the program ensures that newborns and their mothers are visited by Health staff within 2 weeks after birth.
- With the Health Coordinator, review files of new mothers, and:
  - Look for documentation in the files indicating when visits occurred
  - If the visits occurred, determine whether a Health staff member made the visit to the newborn and mother
  - Document any visits that occurred more than 2 weeks after delivery or did not occur at all
  - If visits occurred later than 2 weeks after birth or did not occur at all, document the reason they were late or did not occur, including whether the mother refused or delayed the visit
Comprehensive Services & School Readiness

<table>
<thead>
<tr>
<th>Key Indicator</th>
<th>Federal Regulation</th>
</tr>
</thead>
</table>
| The program provides educational opportunities for parents to enhance their parenting skills that include:  
  • Understanding the educational and developmental needs of their children  
  • Sharing concerns and observations about their children with program staff | 1304.40(e)(2)  
1304.40(e)(3) |

Targeted Questions

Parent—Interview

► Ask parents to discuss the following:
  • What types of information they have received about their children's developmental strengths or areas for growth  
  • How they partner with staff in developing goals for their children  
  • How the program shares information about their children’s progress  
  • Whether they were provided opportunities to share concerns about their children’s development  
  • Information the program shared about how they, as parents, could help promote their children’s success as they get ready to enter school

Teacher, FCC Provider, Home Visitor—Interview

► Ask the staff to describe how the program provides opportunities for developing parenting skills and knowledge in the following areas:
  • Expectant parenting and pre-natal health (as applicable)  
  • Strategies to support their children’s development, including development of individual children’s goals and strategies for preparing their children for school  
  • Ensuring the health and safety of their children  
  • Providing input and sharing concerns regarding their children
Head Start Key Indicator-Compliant (HSKI-C) #20

Comprehensive Services & School Readiness

<table>
<thead>
<tr>
<th>Key Indicator</th>
<th>Federal Regulation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Program staff:</td>
<td></td>
</tr>
<tr>
<td>• Educate parents about how to strengthen and nurture supportive environments and relationships in the home and at the program</td>
<td>1304.24(a)(1)(i)</td>
</tr>
<tr>
<td>• Identify appropriate responses to children’s behaviors</td>
<td>1304.24(a)(1)(ii)</td>
</tr>
<tr>
<td>• Encourage parents to share concerns and observations about their children’s mental health</td>
<td>1304.24(a)(1)(iii)</td>
</tr>
<tr>
<td>• Share observations with parents regarding their children’s behavior and development</td>
<td>1304.24(a)(1)(iv)</td>
</tr>
</tbody>
</table>

Targeted Questions

Early Child Development (ECD) Coordinator—Interview

► Ask the ECD Coordinator about the types of training and materials shared with parents. Collect information about how the mental health professional and/or staff:
  • Educate parents about how to strengthen and nurture supportive environments and relationships in the home and at the program
  • Identify appropriate responses to children’s behaviors
  • Encourage parents to share concerns and observations about their children’s mental health
  • Share observations with parents regarding their children’s behavior and development

Teacher, Family Child Care (FCC) Provider, Home Visitor—Interview

► Ask how ECD Staff:
  • Share information, observations, and concerns about children’s behavior and mental health with parents
  • Seek parents’ input to clarify their understanding
  • Provide parents with opportunities to share their own observations and concerns
Comprehensive Services & School Readiness

<table>
<thead>
<tr>
<th>Key Indicator</th>
<th>Federal Regulation</th>
</tr>
</thead>
<tbody>
<tr>
<td>The program makes provisions for Mental Health program services for parents and staff that include:</td>
<td></td>
</tr>
<tr>
<td>• Staff and parent education on mental health issues</td>
<td>1304.24(a)(3)(ii)</td>
</tr>
<tr>
<td>• On-site mental health consultation with mental health professionals</td>
<td></td>
</tr>
<tr>
<td>• Activities promoting children’s mental wellness</td>
<td></td>
</tr>
</tbody>
</table>

Targeted Questions

Family and Community Engagement (FCE) Coordinator and FCE Staff—Interview

► Ask the FCE Coordinator and staff to describe how they share information and educational resources regarding children’s mental health and wellness and whether they have access to the Mental Health Consultant.

Educational resources on mental health and wellness should be provided to groups and individuals as needed. Focus on the type and quality of services and information provided to individual or groups of parents.

ECD Coordinator—Interview

► Ask what types of educational resources related to mental health issues are provided by the program to staff and parents. Ask how the mental health professional is involved and whether consultation is provided on site.
Head Start Key Indicator-Compliant (HSKI-C) #22

Comprehensive Services & School Readiness

<table>
<thead>
<tr>
<th>Key Indicator</th>
<th>Federal Regulation</th>
</tr>
</thead>
<tbody>
<tr>
<td>The program coordinates with and has current Interagency Agreements in place</td>
<td>1304.41(a)(4)</td>
</tr>
<tr>
<td>with Local Education Agencies (LEAs) and other agencies (Part C) within the</td>
<td>1308.4(l)(3)</td>
</tr>
<tr>
<td>service area.</td>
<td>1308.4(l)(4)</td>
</tr>
<tr>
<td></td>
<td>1308.4(l)(5)</td>
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<tr>
<td></td>
<td>1308.4(l)(7)</td>
</tr>
</tbody>
</table>

Targeted Questions

Disabilities Services Coordinator- Interview

- Review the program’s Interagency Agreements with all the LEAs and other agencies (including Part C agencies for programs serving infants and toddlers) within the grantee’s service areas and determine whether each of the following subjects is addressed:
  - Referrals for evaluations, Individualized Education Program/Individualized Family Service Plan meetings, and placement decisions
  - Transitions
  - File and resource sharing (school readiness goals and assessment information)
  - The current program year, with appropriate signatures and dates
- Ask the coordinator for the number of Interagency Agreements needed to ensure services are provided for all children with disabilities throughout the service area.
- When multiple districts exist, ask the coordinator to describe the process for ensuring effective Interagency Agreements are developed and maintained.
- If the program does not have formal agreements with some LEAs or Part C agencies, ask the coordinator the following:
  - Why agreements have not been made, with a description of efforts to date
  - Whether the Regional Office has been formally notified, and the recommended next steps
Comprehensive Services & School Readiness

<table>
<thead>
<tr>
<th>Key Indicator</th>
<th>Federal Regulation</th>
</tr>
</thead>
<tbody>
<tr>
<td>The program has a system and processes in place to do the following in order to track, use, and report progress on school readiness goals:</td>
<td>1307.3(b)(2)(i) 1307.3(b)(2)(ii)</td>
</tr>
</tbody>
</table>

Aggregate and analyze the following:
- Individual, ongoing child-level assessment data for all children birth to age 5
- Child-level data at least three times a year using data from one or more valid and reliable assessment tools
- For programs serving dual-language learners (DLLs):
  - Status and progress in acquiring the knowledge and skills described in the Head Start Child Development and Early Learning Framework (demonstrated in any language, including the child’s home language) toward learning English

In order to use school readiness data:
- Combine input from parents and families with assessment data to determine each child’s status and progress in the five essential domains
- Individualize experiences, instructional strategies, and services to best support each child
- In combination with other program data, determine progress towards meeting program goals
- Assess the fidelity of implementation of the curriculum
- Direct continuous improvement related to the effectiveness of curriculum, instruction, professional development, and program design or other program decisions based on analysis of school readiness outcomes data

Report Results
- To inform parents and the community of the program’s progress in achieving school readiness goals

Note: Programs in operation fewer than 90 days are required to have a system to aggregate and analyze data at least twice during their program operation period.
Targeted Questions

School Readiness Assessment—Interview With ECD Coordinator and Head Start Director

► How does the program aggregate and analyze individual, ongoing child-level assessment data for children birth to age 5 in all program options (e.g., home-based, center-based, FCC, EHS, and Head Start)?
► Does the program have a plan to complete the required aggregate-data analysis?
► Ask the ECD Coordinator and Director to describe how the information gathered from the aggregated-data analysis helps the program assess progress toward achieving school readiness goals. (Ask them to provide specific examples, and document them in your notes.)
► Ask the ECD Coordinator and Director to describe how the program makes improvements in the following areas based on its analysis of school readiness outcomes. (Ask them to include examples, and document them in your notes.):
  • Curriculum and instruction
  • Professional development
  • Program design
  • Other program decisions
► Describe how the program supports DLLs in making progress toward school readiness goals and learning English.
► Describe how the program informs parents and the community of its progress in achieving school readiness goals.
► Ask the ECD Coordinator and Director to describe how the information gathered from the aggregated-data analysis helps the program assess progress toward achieving school readiness goals. (Ask them to provide specific examples, and document them in your notes.)

Teacher, Home Visitor, and FCC Provider-Interview

► Ask ECD staff to describe how they do the following. (Ask for specific examples, and document them in your notes.):
  • Use ongoing child-level assessment data to identify children’s levels of development
  • Provide experiences to support children’s development
  • Monitor children's progress throughout the program year
Comprehensive Services & School Readiness

<table>
<thead>
<tr>
<th>Key Indicator</th>
<th>Federal Regulation</th>
</tr>
</thead>
<tbody>
<tr>
<td>The program selects and implements a curriculum that is evidence based and is linked to ongoing assessment, with developmental and learning goals and measurable objectives.</td>
<td>642(f)(3)(C)</td>
</tr>
</tbody>
</table>

Targeted Questions

ECD Coordinator—Interview

- List the curricula the program uses for each program option and age group.
- Ask the ECD Coordinator to indicate whether each selected curriculum:
  - Supports the evidence base for its selection by considering the program option and ages of the children served, as well as by addressing staff development and training
  - Is linked to ongoing assessment
  - Includes developmental and learning goals appropriate for the ages of the children and program option
  - Includes measurable objectives
- Ask the ECD Coordinator to describe how he or she determines whether staff are implementing the curriculum as designed.
Comprehensive Services & School Readiness

<table>
<thead>
<tr>
<th><strong>Key Indicator</strong></th>
<th><strong>Federal Regulation</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>The program uses information from ongoing observations and evaluations, as well as insight from parents, to determine how best to respond to each child’s individual characteristics, strengths, and needs.</td>
<td>1304.20(f)(1)</td>
</tr>
</tbody>
</table>

*Note: Screenings results used for referring children for future evaluation is captured in Child Health and Safety and does not apply to individualizing in CDE.*

**Targeted Questions**

Teacher, Home Visitor, FCC Provider—Interview

- Ask ECD staff to discuss how they use information to develop goals and plan experiences that respond to each child’s individual characteristics, strengths, and needs.

Ensure the following are included when individualizing for children:

- Ongoing observations
- Ongoing assessments of progress
- Insights from each child’s family
Head Start Key Indicator-Compliant (HSKI-C) #26

Comprehensive Services & School Readiness

<table>
<thead>
<tr>
<th>Key Indicator</th>
<th>Federal Regulation</th>
</tr>
</thead>
<tbody>
<tr>
<td>The program has secured the services of a mental health professional,</td>
<td>1304.24(a)(3)(i)</td>
</tr>
<tr>
<td>including on-site consultation for program staff and families that provides</td>
<td>1304.24(a)(2)</td>
</tr>
<tr>
<td>for timely identification and interventions to address children’s mental</td>
<td></td>
</tr>
<tr>
<td>health concerns.</td>
<td></td>
</tr>
</tbody>
</table>

Targeted Questions

Mental Health Services Coordinator—Interview

- Ask the Mental Health Coordinator to describe how the program uses the services of the mental health professional to identify and provide interventions to address mental health concerns and how frequently these consultations occur.
- Determine the role of the Mental Health Consultant and the type of services he or she provides to the program. Describe how the coordinator and consultant are involved in the design and implementation of program practices.
- If applicable, review the mental health professional’s Consulting Agreement with the Mental Health Coordinator to determine the types of services for which the professional is responsible and the frequency with which he or she visits the program. If there are discrepancies between the content of the Consulting Agreement and the results of the interview, describe the discrepancies and follow up as appropriate.
Comprehensive Services & School Readiness

<table>
<thead>
<tr>
<th>Key Indicator</th>
<th>Federal Regulation</th>
</tr>
</thead>
</table>

Targeted Questions

Teacher–Preschool—Staff File Review

► Please enter the qualifications of the preschool teacher:
  • A baccalaureate or advanced degree in Early Childhood Education (ECE)
  • A baccalaureate or advanced degree and coursework equivalent to a major relating to ECE, with experience teaching preschool-age children
  • An associate’s degree in ECE
  • An associate’s degree in a related field and coursework equivalent to a major relating to ECE, with experience teaching preschool-age children
  • A baccalaureate degree and admission into the Teach For America program, passing a rigorous Early Childhood content examination such as Praxis II, teaching preschool children in a Teach For America summer training institute, and receiving ongoing professional development and support from Teach For America’s professional staff
  • Does not meet the qualifications

► Is the professional development plan designed to ensure attainment of qualifications, or is the staff person currently enrolled in a degree program?

Teacher–Infant/Toddler—Staff File Review

► Please enter the qualifications of the infant/toddler teacher:
  • A minimum of a current Child Development Associate (CDA) credential and training (or equivalent coursework) in ECD with a focus on infant and toddler development
  • Does not meet qualifications

► Is the professional development plan designed to ensure attainment of qualifications, or is the staff person currently enrolled in a degree program?
13 Key Indicators of Child Care Quality

Child Care Quality Indicators (CCQI – CDPES2 PC1) Scale

Richard Fiene, Ph.D.

Barbara Carl, Ph.D.

August 1, 2010
<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Observation: Caregiver</td>
<td>6</td>
</tr>
<tr>
<td>B. Observation: Environment</td>
<td>12</td>
</tr>
<tr>
<td>C. Policy</td>
<td>21</td>
</tr>
<tr>
<td>D. Training</td>
<td>24</td>
</tr>
<tr>
<td>E. Administration (Center Based/Director)</td>
<td>31</td>
</tr>
</tbody>
</table>
13 Key Indicator of Child Care Quality

1. Child Abuse Indicator
2. Immunization Indicator
3. Staff Child Ratio and Group Size Indicator
4. Staff (Director and Teacher) Qualifications Indicators (2 Indicators)
5. Staff Training Indicator
6. Supervision/Discipline Indicator
7. Fire Drills Indicator
8. Medication Indicator
9. Emergency Plan/Contact Indicator
10. Outdoor Playground Indicator
11. Toxic Substances Indicator
12. Handwashing/Diapering Indicator

Note: Each of the following items includes a series of numbers and letters in parenthesis. The first number listed refers to which of the 13 Indicators the item relates to. The remaining series of numbers and letters relates to the resource and standard the item is drawn from.
The purpose of this tool/Scale is to provide guidance for state child care agencies as they think about revising their state child care regulations and the need for national child care standards. The tool is based upon a synthesis of literature around the health and safety standards for out-of-home child care found in Stepping Stones to Using Caring for Our Children, using 13 predictor/indicator topics to provide focus. The tool examines evidence that exists to support how these standards protect children from harm. The audiences for this research brief are state administrators and policymakers, child care providers, and early childhood researchers. It combines two licensing measurement methodologies (Fiene & Kroh, 2000): 1) Licensing weighting and 2) indicator systems.

Licensing weighting and indicator systems are two licensing measurement tools that have been utilized in the licensing literature for the past 20 years. These two methodologies are part of the Licensing Curriculum developed by the National Association for Regulatory Administration. These methodologies constitute the most researched tools for conducting inferential inspections by licensing agencies. The National Resource Center for Health and Safety in Child Care utilized the two licensing measurement methodologies to develop a user-friendly, shortened assistance tool based upon Caring for Our Children: National Health and Safety Performance Standards for Out-of-Home Child Care, a comprehensive standards document containing over 900 standards. The shortened publication, Stepping Stones to Using Caring for Our Children, is a statistically determined version of Caring for Our Children, based upon the most critical standards to protect children from harm in out-of-home child care. Employing the indicator system methodology, this tool builds upon Stepping Stones by focusing on those standards that protect children from harm in child care. These standards are also key predictors regarding children’s positive outcomes while in child care and are statistical indicators of overall compliance with child care regulations. The indicators in this tool contain a reduced number of standards from those presented in Stepping Stones. These standards have gone through a weighting consensus based on risk factors as well as an indicator methodology that selects standards on the basis of being able to predict overall compliance with standards and positive outcomes for children. As state regulations are rewritten, this tool will constitute a major step forward in support of state child care agencies as they attempt to ascertain which standards are the keys to protecting children. This tool is the final product of a lengthy process that started in 1979, when the Federal Interagency Day Care Requirements (FIDCR) were being drafted and the Department of Health, Education and Welfare (HEW) was looking for a streamlined tool for conducting monitoring reviews.

The weighted licensing indicator system was just being developed in Pennsylvania (Fiene & Nixon, 1981) and this new methodology looked like a potential solution for the FIDCR standards. Although the FIDCR standards went through several drafts, the standards were never finished and implemented. However, the interest of HEW (became the Department of Health and Human Services (HHS) in 1980) in the weighted licensing indicator system methodology never wavered. A federal demonstration grant was given to Pennsylvania to further develop this methodology and begin pilot testing it in a consortium of states from 1980-1985 (Fiene, 1988). After 1980 it became clear that the monitoring focus for child care programs was shifting from the federal government to the states. HHS wanted to assist states in their monitoring efforts and felt that the weighted licensing indicator system was an innovative means for doing this.
During 1980’s and early 1990’s, many states utilized this methodology to help streamline their licensing enforcement systems. In 1994, a study from the U.S. General Accounting Office (GAO) estimated that 30 states were using the methodology in one form or another. The methodology has been used in child care and in other human services areas as well, including: mental health, early intervention, child welfare, and youth services (Fiene, 1988). During this time, a national data base was established at the Pennsylvania State University in order to track the various state regulations that constituted respective states’ weighted licensing indicator systems. The remarkable aspect of this data collection effort and data base was that a core set of indicators began to appear. Although the wording was not exact from state to state, every state had the same indicators appearing on their indicator checklists in some fashion. Thirteen key indicators consistently appeared.

The 13 indicators are the following: child abuse reporting and clearances, proper immunizations, staff child ratio and group size, director and teacher qualifications, staff training, supervision/discipline, fire drills, administration of medication, emergency plan/contact, outdoor playground safety, inaccessibility of toxic substances, and hand washing/diapering. From the early 1990’s, the methodology began to gain the attention of national organizations that were interested in utilizing it outside of the licensing domain. For example, the National Child Care Association was interested in using it for their newly developing accreditation system (Fiene, 1992). In 1994, the Maternal and Child Health Bureau and the National Resource Center for Health and Safety in Child Care became interested in exploring a means for targeting certain standards in *Caring for Our Children* based upon the methodology. *Stepping Stones* is the product of that endeavor. However, only the weighting consensus portion of the methodology was utilized in the development of *Stepping Stones*. This tool completes that process by incorporating the key indicator portion of the methodology.

This tool updates reviews of recent research that is related to the 13 indicators that form the basis of the national database maintained at the Pennsylvania State University. It also lists the standards from *Caring for Our Children* that correspond to the 13 indicators. In many of the indicators, several standards are listed because the indicator was represented by different wording or emphases in the various state regulations. Therefore, when the comparison between the *Caring for Our Children* standards and the national data base of the state child care regulations was completed, many variations on each specific indicator were included. The research brief then summarizes the research that has been completed in the 1990’s and identifies gaps where additional research is needed. Following that, a summary table gives additional detail in an annotated bibliographic fashion on key studies that demonstrate the importance of the particular indicator. This research base and review clearly documents the importance of the 13 indicators when determining the health and safety of young children in child care and the overall quality of a program. These key indicators support and embrace the overall research literature related to child care quality. Many of the indicators have been identified as key surrogates of child care quality that have an impact on young children and as being a reliable tool for identifying high compliant versus low compliant programs. The research literature over the past 20 years has demonstrated that these indicators accomplish two things. One, they statistically predict overall compliance with regulations in particular states. And two, a significant relationship exists between compliance with these indicators and positive outcomes for young children (Fiene, 1994).
A. Observation: Caregiver

1. Caregivers are allowed 15 minute break time every 4 hours AND a lunch break of 30 minutes (1:HP 102).
   
   Yes   No

2. Child:staff ratios are maintained at all times (3:ST002).
   
   Yes   No

<table>
<thead>
<tr>
<th>Age</th>
<th>Child-staff ratio</th>
<th>Maximum group size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Birth-12 months</td>
<td>3:1</td>
<td>6</td>
</tr>
<tr>
<td>13-24 months</td>
<td>3:1</td>
<td>6</td>
</tr>
<tr>
<td>25-30 months</td>
<td>4:1</td>
<td>8</td>
</tr>
<tr>
<td>31-35 months</td>
<td>5:1</td>
<td>10</td>
</tr>
<tr>
<td>3 year olds</td>
<td>7:1</td>
<td>14</td>
</tr>
<tr>
<td>4 year olds</td>
<td>8:1</td>
<td>16</td>
</tr>
<tr>
<td>5 year olds</td>
<td>8:1</td>
<td>16</td>
</tr>
<tr>
<td>6-8 year olds</td>
<td>10:1</td>
<td>20</td>
</tr>
<tr>
<td>9-12 year olds</td>
<td>12:1</td>
<td>24</td>
</tr>
</tbody>
</table>

3. Does the caregiver have an undergraduate degree in early childhood education, child development, social work, nursing, or other child-related field, or a combination of college course work and experience under qualified supervision? (4:ST012)
   
   Yes   No

4. Does the caregiver have at least 1 year’s experience caring for children? (4:ST012)
   
   Yes   No
5. Is the caregiver in charge of a group licensed/certified as lead teacher, teacher, or associate teachers, with education in child development and early childhood education specific to this age group, as well as supervised experience with the age group of children in care? (4:ST014 and ST016)

Yes   No

6. Do the caregivers who work with infants and toddlers, when asked, report their job function is to foster interactions, diapering, bathing, feeding, holding, comforting and responding? (4:ST015)

Yes   No

7. Do the caregivers who work with 3 to 5 year olds demonstrate knowledge and understanding of these children’s independence and social competence, more complex inner lives, and increasing ability to adapt to their environment and cope with stress (4:ST017)?

Yes   No

8. Does the caregiver demonstrate knowledge about the social and emotional needs and developmental tasks of 5 to 12 year old children, and how to implement a nonacademic, enriching program (4:ST019)?

Yes   No

9. Is supervision of children maintained at all times as specified in Supervision Policy (AD 009)(6: PR 028)?

Yes   No
10. Does discipline include positive guidance, redirection, and the setting of clear-cut limits that foster the child's ability to become self-disciplined? Disciplinary measures shall be clear and understandable to the child, shall be consistent, and shall be explained to the child before and at the time of any disciplinary action (6: PR 031).

Yes  No

11. Do caregivers guide the child to develop self-control and orderly conduct in his/her relationships with peers and adults? (6:PR 032)

Yes  No

12. Do caregivers show children positive alternatives rather than just telling children "no."? (6:PR 032)

Yes  No

13. Is good behavior rewarded? (6:PR 032)

Yes  No

14. Do caregivers work with children without recourse to physical punishment or abusive language? (6:PR 032)

Yes  No

15. Do caregivers use the teaching method described in standard PR 032(Indicator # 14) immediately when it is important to show that aggressive physical behavior toward staff or children is unacceptable? (6:PR033)

Yes  No

16. Do caregivers intervene immediately when children become physically aggressive? (6:PR033)
17. Are established disciplinary practices designed to encourage the child to be fair, to respect property, and to assume personal responsibility and responsibility for others? (6:PR034).

Yes   No

18. Are the following behaviors prohibited in all child care settings and by all caregivers? (6:PR035)

A. Corporal punishment, including hitting, spanking, beating, shaking, pinching, and other measures that produce physical pain.

Yes   No

B. Withdrawal or the threat of withdrawal of food, rest, or bathroom opportunities.

Yes   No

C. Abusive or profane language.

Yes   No

D. Any form of public or private humiliation, including threats of physical punishment.

Yes   No

E. Any form of emotional abuse, including rejecting, terrorizing, ignoring, isolating, or corrupting a child.

Yes   No

19. Caregiver never physically restrains children except as necessary to ensure their own safety or that of others, and then only for as long as is necessary for control of the situation (6:PR036).

Yes   No
20. Children are not given medicines or drugs that will affect their behavior except as prescribed by their health care provider and with specific written instructions from their health care provider for the use of the medicine (6:PR036).

Yes  No

21. "Time out" that enables the child to regain control of himself or herself and that keeps the child in visual contact with a caregiver is used selectively, taking into account the child's developmental stage and the usefulness of "time out" for the particular child (6:PR03y).

Yes  No

22. Is the fire evacuation procedure maintained by the caregiver and practiced at least monthly from all exit locations at varied times of the day and during varied activities, including naptime (7: AD 035)?

Yes  No
23. Do staff and children wash their hands at least at the following times, and whenever hands are contaminated with body fluids: (12:HP 029)?

A. Before food preparation, handling, or serving.  
   Yes   No

B. After toileting or changing diapers.  
   Yes   No

C. After assisting a child with toilet use.  
   Yes   No

D. Before handling food.  
   Yes   No

E. Before any food service activity (including setting the table).  
   Yes   No

F. Before and after eating meals or snacks.  
   Yes   No

G. After handling pets or other animals.  
   Yes   No

**Place checkmark for Yes. Place X for No. Notate for each incidence observed.**

<table>
<thead>
<tr>
<th></th>
<th>Adult</th>
<th>Children</th>
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<tbody>
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<td>A.</td>
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<td>B.</td>
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<td>C.</td>
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<td>E.</td>
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<td>F.</td>
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<tr>
<td>G.</td>
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</table>

NOTE: Children and staff must wash and scrub their hands for at least 20 seconds with soap and warm running water to receive credit (12:HP 030).
Observation: Environment

24. The physical layout of the facility is arranged to ensure all areas can be viewed by at least two adults (caregiver and another). The purpose of this is to ensure each caregiver can be observed while interacting with children. This includes areas where the child may be undressed or have their genitals exposed (bathroom)(1:HP104).

Yes  No

Outdoor Playground

25. Are sunlit areas and shaded areas provided by means of open space and tree plantings or other cover in outdoor spaces (10: FA 234)?

Yes  No

26. Is the outdoor play area enclosed with a fence or natural barriers and includes the following (10: FA 235):
   A. The barrier is at least 4 feet in height and the bottom edge shall be no more than 3 1/2 inches off the ground.

Yes  No

   B. There are at least two exits from such areas, with at least one remote from the buildings.

Yes  No

   C. Gates are equipped with self-closing and positive self-latching closure mechanisms.

Yes  No

   D. The latch or securing device is high enough or of such a type that it cannot be opened by small children.

Yes  No

   E. The openings in the fence are no greater than 3 1/2 inches.

Yes  No

   F. The fence is constructed to discourage climbing.

Yes  No
27. If soil is used in the play areas,
   A. It does not contain hazardous levels of any toxic chemical or substances. The facility shall have soil samples and analyses performed by the local health department, extension service, or environmental control testing laboratory, as required, where there is good reason to believe a problem may exist. (10:FA 236)

   Yes   No

   B. The soil in play areas shall be analyzed for lead content initially. It shall be analyzed at least once every 2 years where the exteriors of adjacent buildings and structures are painted with lead containing paint. Lead in soil shall not exceed 500 ppm. Testing and analyses shall be in accord with procedures specified by the regulating health authority. (10:FA 237)

   Yes   No

28. If sandboxes are used, are they:
   A. constructed to permit drainage?

   Yes   No

   B. covered tightly and securely when not in use?

   Yes   No

   C. kept free from cat or other animal excrement? (10:FA 238)

   Yes   No

   D. Sand used in sandboxes does not contain toxic or harmful materials? (10: FA 239)

   Yes   No

29. Is outdoor storage available for equipment not secured to the ground, unless indoor storage space is available? (10:FA 240)

   Yes   No
30. No anchored play equipment is placed over, or immediately adjacent to, hard surfaces. (10: FA 241)
   Yes   No

31. Is all outdoor play equipment of safe design and in good repair?
   Yes   No

32. Are climbing equipment and swings set in concrete footings located below ground surface (at least 6 inches)?
   Yes   No

33. Do swings have soft and, or flexible seats?
   Yes   No

34. Is access to play equipment limited to age groups for which the equipment is developmentally appropriate? (10: FA 242)
   Yes   No

35. Are all pieces of playground equipment designed to match the body dimensions of children (10: FA 243)?
   Yes   No

36. Are all pieces of playground equipment installed so that an average adult will not be able to cause a fixed structure to wobble or tip (10:FA 244)?
   Yes   No

37. Are all paved surfaces well drained to avoid water accumulation and ice formation?(10:FA 252:
   Yes   No
38. Are all pieces of playground equipment?

A. Surrounded by a resilient surface (e.g., fine, loose sand; wood chips; wood mulch) of an acceptable depth (9 inches), or by rubber mats manufactured for such use, consistent with the guidelines of the Consumer Product Safety Commission and the standard of the American Society for Testing and Materials,

Yes   No

B. Extend beyond the external limits of the piece of equipment for at least 4 feet beyond the fall zone of the equipment. These resilient surfaces must conform to the standard stating that the impact from falling from the height of the structure will be less than or equal to peak deceleration 200G(63). Organic materials that support colonization of molds and bacteria shall not be used. (10:FA 245).

Yes   No

C. Designed so that moving parts (swing components, teeter totter mechanism, spring ride springs, etc.) will be shielded or enclosed (10:FA 246).

Yes   No

D. Free of sharp edges, protruding parts, weaknesses, and flaws in material construction. Sharp edges in wood, metal, or concrete shall be rounded to a minimum of 1/2 inch wide on all edges. Wood materials shall be sanded smooth and shall be inspected regularly for splintering. (10:FA 247).

Yes   No

E. All pieces of playground equipment shall be designed to guard against entrapment or situations that may cause strangulation by being made too large for a child's head to get stuck or too small for a child's head to fit into. Openings in exercise rings shall be smaller than 4 inches or larger than 9 inches in diameter. There shall be no openings in a play structure with a dimension between 4 and 5/8 inches and 9 and 1/8 inches. In particular, side railings, stairs, and other locations where a child might slip or try to climb through shall be checked for appropriate dimensions. Protrusions such as pipes or wood ends that may catch a child's clothing are prohibited. Distances between vertical infill, where used, must be 4 and 5/8 inches or less to prevent entrapment of a child's head. No opening shall have a vertical angle of less than 55 degrees. To prevent finger entrapment, no opening larger than 3/8 inch and smaller than 1 inch shall be present. (10:FA 248).

Yes   No
F. All bolts, hooks, eyes, shackles, rungs, and other connecting and linking devices of all pieces of playground equipment shall be designed and secured to prevent loosening or unfastening except by authorized individuals with special tools. (10:FA 249)

Yes  No

G. Crawl spaces of all pieces of playground equipment, such as pipes or tunnels, shall be securely anchored to the ground to prevent movement, and shall have a minimum diameter that permits easy access to the space by adults in an emergency or for maintenance. (10:FA 250)

Yes  No

H. The maximum height of any piece of playground equipment shall be no greater than 5 and 1/2 feet if children up to the age of 6 are given access to it, and no higher than 3 feet if the maximum age of children is 3 years. (10:FA 251)

Yes  No

39. Are all walking surfaces, such as walkways, ramps, and decks, have a nonslip finish (10: FA 253)?

Yes  No

40. Are all walking surfaces and other play surfaces free of holes and sudden irregularities in the surface (10: FA 254)?

Yes  No

41. Does space used for wheeled vehicles (10:FA255)
   A. Have a flat, smooth, and nonslippery surface?

   Yes  No

   B. Have a physical barrier separating this space from traffic, streets, parking, delivery areas, driveways, stairs, hallways used as fire exits, balconies, and pools and other areas containing water?

   Yes  No
42. Are all outdoor activity areas maintained in a clean and safe condition by removing debris, dilapidated structures, broken or worn play equipment, building supplies, glass, sharp rocks, twigs, toxic plants, and other injurious material?

   Yes    No

43. Are play areas free from anthills, unprotected ditches, wells, holes, grease traps, cisterns, cesspools, and unprotected utility equipment? Holes or abandoned wells within the site shall be properly filled or sealed. The area shall be well drained with no standing water. (10:FA 256)

   Yes    No

44. Is outdoor play equipment not coated or treated with, nor does it contain, toxic materials in hazardous amounts that are accessible to children. (10:FA 257)

   Yes    No

45. Is the general playground surfaces checked every day for broken glass, trash, and other foreign materials (e.g., animal excrement) (10: FA 259)?

   Yes    No

46. Is the playground area checked on a daily basis for areas of poor drainage and accumulation of water and ice (10: FA 260)?

   Yes    No

47. Is any particulate resilient material beneath playground equipment checked at least monthly for packing due to rain or ice and, if found compressed, turned over or raked up to increase resilience capacity? All particulate resilient material, particularly sand, shall be inspected daily for glass and other debris, animal excrement, and other foreign material. Loose fill surfaces shall be hosed down for cleaning and raked or sifted to remove hazardous debris as often as needed to keep the surface free of dangerous, unsanitary materials. (10:FA 261)

   Yes    No
48. Is the playground equipment checked on a monthly basis for the following: (10:FA 262)

<table>
<thead>
<tr>
<th>Option</th>
<th>Yes</th>
<th>No</th>
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<tbody>
<tr>
<td>A. Visible cracks, bending or warping, rusting, or breakage of any equipment.</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>B. Deformation of open hooks, shackles, rings, links, and so forth.</td>
<td>Yes</td>
<td>No</td>
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<tr>
<td>C. Worn swings hangers and chains.</td>
<td>Yes</td>
<td>No</td>
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<tr>
<td>D. Missing, damaged, or loose swing seats.</td>
<td>Yes</td>
<td>No</td>
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<td>E. Broken supports or anchors.</td>
<td>Yes</td>
<td>No</td>
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<td>F. Cement support footings that are exposed, cracked, or loose in the ground.</td>
<td>Yes</td>
<td>No</td>
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<td>G. Accessible sharp edges or points.</td>
<td>Yes</td>
<td>No</td>
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<tr>
<td>H. Exposed ends of tubing that require covering with plugs or caps.</td>
<td>Yes</td>
<td>No</td>
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<tr>
<td>I. Protruding bolt ends that have lost caps or covers.</td>
<td>Yes</td>
<td>No</td>
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<tr>
<td>J. Loose bolts, nuts, and so forth that require tightening.</td>
<td>Yes</td>
<td>No</td>
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<td>K. Splintered, cracked, or otherwise deteriorating wood.</td>
<td>Yes</td>
<td>No</td>
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<tr>
<td>L. Lack of lubrication on moving parts.</td>
<td>Yes</td>
<td>No</td>
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<tr>
<td>M. Worn bearings or other mechanical parts.</td>
<td>Yes</td>
<td>No</td>
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<tr>
<td>N. Broken or missing rails, steps, rungs, or seats.</td>
<td>Yes</td>
<td>No</td>
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<tr>
<td>O. Worn or scattered surfacing material.</td>
<td>Yes</td>
<td>No</td>
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<tr>
<td>P. Hard surfaces, especially under swings, slides, and so forth (e.g., places where resilient material has been shifted away from any surface underneath play equipment).</td>
<td>Yes</td>
<td>No</td>
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<tr>
<td>Q. Chipped or peeling paint.</td>
<td>Yes</td>
<td>No</td>
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<tr>
<td>R. Pinch or crush points, exposed mechanisms, juncture, and moving components.</td>
<td>Yes</td>
<td>No</td>
</tr>
</tbody>
</table>
49. Are all cleaning materials, detergents, aerosol cans, pesticides, health and beauty aids, poisons, and other toxic materials stored in their original labeled containers and used according to the manufacturer’s instructions and for the intended purpose?

   Yes   No

50. Are all cleaning materials used only in a manner that will not contaminate play surfaces, food, or food preparation areas, and that will not constitute a hazard to the children?

   Yes   No

51. When not in actual use, are all cleaning materials kept in a place inaccessible to children and separate from stored medications and food? (11:FA120)

   Yes   No

52. Are toilets and sinks, easily accessible for use and supervision, and provided in the following ratios:
   A. Toilets, urinals, and hand sinks are apportioned at a ratio of 1:10 for toddlers and preschool-age children and 1:15 for school-age children.

   Yes   No

   B. Maximum toilet height is 11 inches and maximum hand sink height is 22 inches.

   Yes   No

   C. Urinals do not exceed 30 percent of the total required toilet fixtures.

   Yes   No

   D. When the number of children in the ratio is exceeded by one, an additional fixture is required. These numbers are subject to the following minimums: (12:FA 144)

   A. A minimum of one sink and one flush toilet for 10 or fewer toddlers and preschool age children using toilets.

   Yes   No

   B. A minimum of one sink and one flush toilet for 15 or fewer school age children using toilets.

   Yes   No
C. A minimum of two sinks and two flush toilets for 16 to 30 children using toilets.  

   Yes          No

D. A minimum of one sink and one flush toilet for each additional 15 children.  

   Yes          No

53. The changing area is not located in food preparation areas and is never be used for temporary placement or serving of food. (12:FA 154)  

   Yes          No

54. Changing tables (12:FA 156)  
A. have impervious, nonabsorbent surfaces?  
   Yes          No  
B. are sturdy?  
   Yes          No  
C. are adult height?  
   Yes          No  
D. are equipped with railings?  
   Yes          No  
E. do not have safety straps?  
   Yes          No

55. If cloth diapers are used, is a toilet easily accessible so that waste contents may be disposed of by dumping before placing the diapers in the waste receptacle? (12:FA 158)  

   Yes          No

56. Are conveniently located, washable, plastic lined, tightly covered receptacles, operated by a foot pedal used for and soiled burping cloths and linen. (12:FA 159)?  

   Yes          No
C. Policy

57. Caregivers who report child abuse are protected from any disciplinary action, unless the report is found to be malicious (1:HP097).

Yes    No

58. Symptoms and indicators of child abuse are included in written policies (1:HP100)

Yes    No

59. Caregivers must report suspected sexually transmitted disease in children to a health care provider as well as the parent in order to make certain the child is taken for care (1:HP104).

Yes    No

60. Any staff who will be alone with children shall have their references checked and employment history examined before employment (1:ST034).

Yes    No

61. All children in care are required to be up to date on the current American Academy of Pediatrics (AAP) immunization schedule (2:APP 26).

Yes    No

62. All staff involved with direct care are certified in pediatric first aid that includes rescue breathing and first aid for choking (5:ST044).

Yes    No

63. At least one person who is certified in pediatric first aid that includes rescue breathing and first aid for choking is in attendance at all times and in all places that children are in care (5:ST044).
64. Does the facility's supervision policy specify:

A. That no child shall be left alone or unsupervised while under the care of the child care staff.
   - Yes   No

B. Caregivers shall supervise children at all times, even when the children are sleeping (a caregiver must be able to both see and hear infants while they are sleeping).
   - Yes   No

C. Caregivers shall not be on one floor while children are on another floor.
   - Yes   No

D. School-age children shall be permitted to participate in activities and visit friends off premises as approved by their parents and by the caregiver(s)
   - Yes   No

E. That developmentally appropriate child:staff ratios shall be met during all hours of operating, including field trips.
   - Yes   No

F. The policy shall include specific procedures governing supervision of the indoor and outdoor play spaces that describe the child:staff ratio, precautions to be followed for specific areas and equipment, and staff assignments for high-risk areas.
   - Yes   No

G. The supervision policies of centers are written policies. (6:AD 009)
   - Yes   No

65. Is there a written policy for the use of any commonly used, nonprescription medication as specified in medication administration indicators in the Director/Center Administration section?
   - Yes   No
66. Does RCL provide child care workers with hazard information, as required by the Occupational Safety and Health Administration (OSHA), about the presence of toxic substances such as asbestos or formaldehyde? Such information shall include the identification of the ingredients of art materials and disinfectants. (11:FA 122)

Yes   No

67. When the manufacturer's Material Data Safety Sheet shows the presence of any toxic effects, are these materials replaced with nontoxic substitutes? If no substitute is available, the product shall be eliminated (11:FA 123).

Yes   No
D. Training

68. Caregivers are aware of the common behaviors shown by abused children (1:HP96).

Yes  No

69. Employees receive an instruction sheet about child abuse reporting (1:HP098)

Yes  No

70. All caregivers in all settings and levels of employment know the definitions of the four forms of child abuse (physical, sexual, emotional and neglect) and can provide examples (1:HP099).

Yes  No

71. Caregivers with a year of experience in child care know the symptoms and indicators of abuse that abused children may show (1:HP100).

Yes  No

72. Caregivers know the common factors, both chronic and situational, that lead to abuse (1:HP100).

Yes  No

73. Documented training is provided to all caregivers on the signs and symptoms of sexually transmitted diseases in children (1:HP104)

Yes  No
74. Does the center require Director to provide documentation of one course or 26-30 clock hours of training in health and safety issues? This training is in addition to other educational qualifications required upon employment. The training shall include at least the following content (4:ST009):

A. Mechanisms of the spread of communicable diseases. Yes No

B. Procedures for preventing the spread of communicable diseases, including handwashing, sanitation, diaper changing; required notification to the health department relating to communicable diseases; equipment, toy selection and proper washing and disinfecting to reduce disease and injury risk, and health related aspects of pets in the facility. Yes No

C. Immunization requirements for children and staff Yes No

D. Common childhood illnesses and their management, including child care exclusion policies. Yes No

E. Organization of the facility to reduce illness and injury risks. Yes No

F. Training child care staff and children on infection and injury control. Yes No

G. Emergency procedures. Yes No

H. Promotion of health in the child care setting. Yes No
75. Does all new staff (both full and part time) shall receive **documented** orientation **during the week immediately following hire**, that includes, at a minimum, the following: (5:ST040; 5(ST041))

A. The goals and philosophy of the facility.  
   Yes  
   No

B. The names and ages of the children for whom the caregiver will be responsible, and their specific developmental needs.  
   Yes  
   No

C. Any special adaptation(s) of the facility required for a child with special needs.  
   Yes  
   No

D. Any special health or nutrition need(s) of the children assigned to the caregiver.  
   Yes  
   No

E. The planned program of activities at the facility.  
   Yes  
   No

F. Routines and transitions.  
   Yes  
   No

G. Acceptable methods of discipline.  
   Yes  
   No

H. Policies of the facility about relating to parents.  
   Yes  
   No

I. Meal patterns and food-handling policies of the facility.  
   Yes  
   No

J. Occupational health hazards for caregivers.  
   Yes  
   No

K. Emergency health and safety procedures.  
   Yes  
   No

L. General health policies and procedures, including but not limited to the following:
   
   a. Handwashing techniques, including indications for handwashing.  
      Yes  
      No

   b. Diapering technique and toileting, if care is provided to children in diapers and/or needing help with toileting, including appropriate diaper disposal and diaper-changing techniques.  
      Yes  
      No
c. Correct food preparation, serving, and storage techniques if employee prepares food.  
   Yes  No

d. Formula preparation, if formula is handled.  Yes  No

M. Child abuse detection, prevention, and reporting.  Yes  No

N. Teaching health promotion concepts to children and parents as part of the daily care provided to children.  
   Yes  No

O. Recognizing symptoms of illness.  Yes  No

76. Within the first three months of employment, does all full and part time staff receive additional orientation on the following topics? (5:ST042)

A. Recognition of symptoms of illness and correct documentation procedures for recording illness symptoms.  
   Yes  No

B. Exclusion and readmission procedures.  Yes  No

C. Cleaning, sanitation, and disinfection procedures.  Yes  No

D. Procedures for administering medication to children and for documenting medication administered to children.  
   Yes  No

E. Procedures for notifying parents or legal guardians of communicable disease occurring in children or staff within the facility.  
   Yes  No

F. Procedures for performing the daily health assessment of children to determine whether they are ill and whether they need to be excluded from the facility.  
   Yes  No
77. Is any caregiver who administers medication trained to check for the following (8:HP 087)
   A. Name of the child                   Yes    No
   B. To read the label/prescription directions in relation to the measured dose, frequency, and other circumstances relative to administration (e.g., relation to meals);
      Yes    No
   C. To document properly that the medication was administered.
      Yes    No

78. Are staff expected to take responsibility for aspects of care ONLY after they have been oriented and trained? (5:ST043)
      Yes    No

79. Is the pediatric aid training, including rescue breathing and first aid for choking, consistent with pediatric first aid training developed by the American Red Cross, the American Heart Association, or the National Safety Council for First Aid Training Institute, or the equivalent of one of the three? The offered first aid instruction shall include, but not be limited to, the emergency management of: (5:ST046)
   A. Bleeding.                        Yes    No
   B. Burns.                          Yes    No
   C. Poisoning.                      Yes    No
   D. Choking.                        Yes    No
   E. Injuries, including insect, animal, and human bites. Yes    No
   F. Shock.                          Yes    No
   G. Convulsions or nonconvulsive seizures. Yes    No
   H. Musculoskeletal injury (e.g., sprains, fractures). Yes    No
   I. Dental emergencies.             Yes    No
   J. Head injuries.                  Yes    No
   K. Allergic reactions.             Yes    No
   L. Eye injuries.                   Yes    No
   M. Loss of consciousness.          Yes    No
   N. Electric shock.                 Yes    No
   O. Drowning.                      Yes    No
80. Are there current records of certification of pediatric first aid including rescue breathing and first aid for choking (and infant and child CPR) (5:ST049)?

Yes   No

81. When providing care in a facility that has a swimming pool or wading pool, are caregivers required to have infant and child CPR training (5:ST047)?

Yes   No

82. When providing care in a facility that has a swimming pool or wading pool, does at least one caregiver who is counted in the child:staff ratio trained in basic water safety and certified in infant and child CPR each year by a person certified as an instructor in water safety and in CPR? (Requires written verification kept on file) (5:ST047).

Yes   No

83. When providing care for children with special needs in a facility that has a swimming pool or wading pool, is at least one caregiver certified in infant and child CPR (written verification must be kept on file) (5:ST047)

Yes   No

84. Are the Director and all caregivers required to have at least 30 hours of continuing education the first year of employment? (5:ST050)

Yes   No

85. Does this training include the following: (5:ST050)
   A. 16 hours in child development programming?  Yes   No
   B. 14 hours in child health, safety and staff health?  Yes   No

86. Are the Director and all caregivers required to have at least 24 hours of continuing education in the second and subsequent years of employment? (5:ST050)

Yes   No
87. Does this training include the following: (5:ST050)
   A. 16 hours in child development programming? Yes No
   B. 8 hours in child health, safety and staff health? Yes No

88. Does the facility have a staff training plan for reporting and evacuating in case of fire, flood, tornado, earthquake, hurricane, blizzard, power failure, or other disaster that could create structural damages to the facility or pose health hazards (7: AD 031).
    Yes No

89. Is staff training provided on the emergency plan that is outlined in the Director/Center Administration section?
    Yes No
E. Administration (Center Based/Director)

90. The facility reports suspected child abuse, neglect, or exploitation (1:HP094)
   Yes  No

91. A health care professional is available for consultation for suspected abuse. These names are available for inspection (1:HP095)
   Yes  No

92. Center director knows methods of reducing the risk, how to recognize common symptoms and signs of child abuse (1:HP101).
   Yes  No

93. Is the Director at least 21 years of age? (4:ST006)  Yes  No

94. For programs ONLY offering infant through preschool care:  Does the director of the program have an undergraduate degree in early childhood education, child development, social work, nursing, or other child-related field, or a combination of college course work and experience under qualified supervision? (4:ST006)
   Yes  No

95. For programs ONLY offering school aged care:  Does the director have an undergraduate degree in early childhood education, elementary education, child development, recreation, or other child related field, or a combination of college course work and experience under qualified supervision? (4:ST011).
   Yes  No
96. Does the education of the director include: (4:ST006)

A. College course work in business and/or education administration or an Administrator Credential  
   Yes  No

B. At least four college courses in child development and early childhood education  
   Yes  No

C. Two or more years experience as a teacher of children of the age group(s) in care. (Select all that apply) (4:ST010)
   
   0-35 months  Yes  No
   3 to 5 years  Yes  No
   6 years and up (school aged care)  Yes  No

97. Does the Director have teaching duties in addition to his/her administrative role? (4:ST008)  
   Yes  No

98. Does the director have a valid certificate in pediatric first aid, including management of a blocked airway, and rescue breathing?  
   Yes  No

99. Does the director have at least one year experience as the administrator of an early childhood program?  
   Yes  No

100. Prior to employment, does the director (4:ST034):

   A. Check the applicant’s references  
      Yes  No

   B. Verify past employment  
      Yes  No

   C. Complete criminal background checks  
      Yes  No
101. Does the center, have at least one licensed/certified lead teacher (or mentor teacher) who has a Bachelor of Arts, Bachelor of Science, Bachelor of Education, or Master of Education degree in early childhood education, child development, social work, nursing, or other child-related field, as well as at least 1 year of experience working in child care with this age group? (4:ST 016 and ST018)

   Yes    No

102. Does the facility have a written plan for reporting and evacuating in case of fire, flood, tornado, earthquake, hurricane, blizzard, power failure, or other disaster that could create structural damages to the facility or pose health hazards (7: AD 031).

   Yes    No

103. Are evacuation drills practiced as follows in areas where natural disasters occur: for tornadoes, on a monthly basis in tornado season; for earthquakes, every 6 months; and for hurricanes, annually (7: AD 032)?

   Yes

   No

104. Does the Center Director use a daily class roster in checking the evacuation and return to a safe indoor space of all children in attendance during an evacuation drill (7: AD 033)?

   Yes    No

105. Is the fire evacuation procedure approved by a fire inspector and practiced at least monthly from all exit locations at varied times of the day and during varied activities, including naptime (7:AD 034)?

   Yes

   No
106. Is the administration of medicines at the facility limited to (8:HP082):

A. Those prescribed medications ordered by a health care provider for a specific child.
   Yes    No

B. Those nonprescription medications recommended by a health care provider for a specific child, with written permission of the parent or legal guardian referencing a written or telephone instruction received by the facility from the health care provider.
   Yes    No

107. Do the requirements of prescription medication brought into the facility by the parent, legal guardian, or responsible relative of a child include (8:HP083):

A. Be kept in the original container labeled by a pharmacist with the child's first and last names;    Yes    No

B. the date the prescription was filled;    Yes    No

C. the name of the health care provider who wrote the prescription;    Yes    No

D. the medication's expiration date; and    Yes    No

E. specific, legible instructions for administration, storage, and disposal (i.e., the manufacturer's instructions or prescription label).    Yes    No

108. Do any over-the-counter medication brought into the facility for use by a specific child include the following:(8:HP084)?

A. In the original, labeled container    Yes    No

B. The date; the child's first and last names;    Yes    No

C. specific, legible instructions for administration and storage (i.e., manufacturer's instructions);    Yes    No
D. the name of the health care provider who made the recommendation.

Yes  No

109. Are/do all medications, refrigerated or unrefrigerated (8: HP085):

A. have child protective caps?      Yes  No
B. kept in an orderly fashion?      Yes  No
C. stored away from food at the proper temperature? Yes  No
D. inaccessible to children?        Yes  No
E. not used beyond the date of expiration? Yes  No

110. Does the facility shall have a written plan for reporting and managing any incident or unusual occurrence that is threatening to the health, safety, or welfare of the children or staff (9:APP28)

Yes  No

111. Are the following incidents, at a minimum, addressed in the emergency plan:

A. lost or missing child;              Yes  No
B. sexual or physical abuse or neglect of a child; Yes  No
C. injuries requiring medical or dental care; Yes  No
D. serious illness requiring hospitalization, death of a child enrolled in the facility, or death of a caregiver, including deaths that occur outside of child care hours.

Yes  No

112. Are the following procedures, at a minimum, addressed in the emergency plan:

A. Provision for a caregiver to accompany a child to the emergency care source and remain with the child until the parent or legal guardian assumes responsibility for the child. Child:staff ratios must be maintained at the facility during the emergency;

Yes  No

B. The source of emergency medical care—a hospital emergency room, clinic, or other constantly staffed facility known to caregivers and acceptable to parents;
C. Ensure that first aid kits are resupplied following each first aid incident, and that required contents are maintained in a serviceable condition, by a periodic review of the contents;

Yes   No

D. The names and addresses of at least three licensed providers of dental services who have agreed to accept emergency dental referrals of children and to give advice regarding a dental emergency.

Yes   No

113. Does the Center Director conduct inspections of the playground area and the playground as specified in the Environment Section (10:FA 258)?

Yes   No

114. Does the facility ensure that staff and children are instructed in, and monitored on, the use of running water, soap, and single-use or disposable towels in handwashing as specified in this chapter (11:HP 031)?

Yes   No

115. Is the poison control center and or physician called for advice about safe use of any toxic products (e.g., pesticides, plants, rat poison) or in any ingestion emergency, and their advice documented in the facility’s files? The poison information specialist and or physician shall be told the child’s age and sex, the substance swallowed and the estimated amount, and the condition of the child. (11:FA 121)

Yes   No

116. Are Radon concentrations less than 4 picocuries per liter of air (11:FA 124)?

Yes   No

117. Has any asbestos that is friable or in a dangerous condition found within a facility been removed by a contractor certified to remove asbestos, encapsulated, or enclosed in
accordance with existing regulations of the Environmental Protection Agency, the federal agency responsible for asbestos abatement. (11:FA 125)?

Yes  No

118. Are pipe and boiler insulation sampled and examined in an accredited laboratory for the presence of asbestos in a friable or potentially dangerous condition (11:FA 126)?

Yes  No

119. Is nonfriable asbestos identified to prevent disturbance and or exposure during remodeling or future activities. (11:FA 127)?

Yes  No

120. Are chemicals used in lawn care treatments limited to those listed as nonrestricted use?

Yes  No

121. Are all chemicals used inside or outside stored in their original containers in a safe and secure manner, accessible only to authorized staff? They shall be used only according to manufacturers’ instructions, and in a manner that will not contaminate play surfaces or articles. (11:FA 128)

Yes  No

122. Are all arts and crafts materials used in the facility nontoxic?

Yes  No

123. Is there no eating or drinking by children or staff during use of such arts and crafts materials?

Yes  No
124. Is the use of old or donated arts and crafts materials with potentially harmful ingredients prohibited? (11:FA 129)  
Yes   No

125. Are poisonous or potentially harmful plants on the premises inaccessible to children?  
All plants accessible to children shall be identified and checked by name with the local poison control center to determine safe use. (11:FA 130)  
Yes   No

126. Is the use of incense, moth crystals or moth balls, and chemical air fresheners that contain ingredients on the Environmental Protection Agency's toxic chemicals lists and those not approved as safe by the state or local regulatory agency prohibited? Contact the EPA Regional offices listed in the federal agency section of the telephone directory for assistance, or contact any nationally certified regional poison control center. (11:FA 131)  
Yes   No

127. Are carpets made of nylon, orlon, wool and/or silk, and other materials that emit highly toxic fumes when they burn not used. (11:FA 132)  
Yes   No

128. Are areas that have been recently carpeted or paneled using an adhesive that may contain toxic materials well ventilated and not used by a facility for at least 7 days after such installation, or until there is no perceptible odor? Ambient testing in compliance with testing requirements of the Environmental Protection Agency shall be conducted if recommended by the local health department or building inspector before occupancy to ascertain that no unsafe levels of toxic substances (e.g., formaldehyde) resulting from the materials or their installation exist. (11:FA 133)  
Yes   No
129. Is insulation or other materials that contain elements that may emit toxic substances (e.g., formaldehyde) over recommended levels in the child care environment not used in facilities? If existing structures contain such materials, the facility shall be monitored regularly to ensure a safe environment as specified by the regulatory agency. (11:FA 134)

Yes    No

130. Are any surfaces painted before 1978 tested for excessive lead levels (11:FA 135)?

A. In all centers, both exterior and interior surfaces covered by paint with lead levels of 0.06 percent and above and accessible to children shall be removed by a safe chemical or physical means or made inaccessible to children, regardless of the condition of the surface.

Yes    No

B. Where lead paint is removed, the surface shall be refinished with lead-free paint or nontoxic material. Sanding, scraping, or burning of high-lead surfaces shall be prohibited.

Yes    No

131. No paint containing lead in excess of 0.06 percent is used when surfaces are repaired or when any new surfaces accessible to children are painted. (11:FA 136)

Yes    No

132. Is construction, remodeling, or alterations of structures during child care operations done in such a manner as to prevent hazards or unsafe conditions (e.g., fumes, dust, safety hazards) (11:FA 137)?

Yes    No
References


Fiene (1986). State child care regulatory, monitoring and evaluation systems as a means for ensuring quality child development programs, in Licensing of Children's Services Programs, Richmond, Virginia: Virginia Commonwealth University School of Social Work. (ERIC/ECE ED322997)


Appendix
Recommended Immunization Schedule for Persons Aged 0 Through 6 Years—United States • 2010

For those who fall behind or start late, see the catch-up schedule

This schedule includes recommendations in effect as of December 15, 2009. Any dose not administered at the recommended age should be administered at a subsequent visit, when indicated and feasible. The use of a combination vaccine generally is preferred over separate injections of its equivalent component vaccines. Considerations should include provider assessment, patient preference, and the potential for adverse events. Providers should consult the relevant Advisory Committee on Immunization Practices statement for detailed recommendations: http://www.cdc.gov/vaccines/pubs/acip-list.htm. Clinically significant adverse events that follow immunization should be reported to the Vaccine Adverse Event Reporting System (VAERS) at http://www.vaers.hhs.gov or by telephone, 800-822-7967.
1. Hepatitis B vaccine (HepB). (Minimum age: birth)  
At birth:  
- Administer monovalent HepB to all newborns before hospital discharge.  
- If mother is negative, administer monovalent HepB within 12 hours of birth.  
- If mother is hepatitis B surface antigen (HBsAg) positive, administer HepB and 0.5 mL of hepatitis B immune globulin (HBIG) within 12 hours of birth.  

After the first dose:  
- HepB series should be completed with either monovalent HepB or a combination vaccine containing HepB. The second dose should be administered at age 1 or 2 months. Monovalent HepB vaccine should be used for doses administered before age 6 weeks. The final dose should be administered no earlier than age 24 weeks.  
- Infants born to HBsAg-positive mothers should be tested for HBsAg at birth. Antibody to HBsAg 1 to 2 months after completion of at least 3 doses of the HepB series, at age 9 through 18 months (generally at the next well-child visit).  
- Administration of 4 doses of HepB to infants is permissible when a combination vaccine containing HepB is administered after the birth dose. The fourth dose should be administered no earlier than age 24 weeks.

2. Rotavirus vaccine (RV). (Minimum age: 6 weeks)  
- Administer the first dose at age 6 through 14 weeks (maximum age: 14 weeks 6 days). Vaccination should not be initiated for infants aged 15 weeks 0 days or older.  
- The maximum age for the final dose in the series is 8 months 0 days  
- If Rotarix is administered at ages 2 and 4 months, a dose at 6 months is not indicated.

3. Diphtheria and tetanus toxoids and acellular pertussis vaccine (DTaP).  
(Minimum age: 6 weeks)  
- The fourth dose may be administered as early as age 12 months, provided at least 6 months have elapsed since the third dose.  
- Administer the final dose in the series at age 4 through 6 years.

4. Haemophilus influenzae type b conjugate vaccine (Hib).  
(Minimum age: 6 weeks)  
- If PRP-OMP (PedvaxHIB or Comvax [HepB-Hib]) is administered at ages 2 and 4 months, a dose at age 6 months is not indicated.  
- TriHibit (DTaP/Hib) and Hibrix (PRP-T) should not be used for doses administered before age 6 weeks. The final dose should be administered no earlier than age 24 weeks.  

5. Pneumococcal vaccine. (Minimum age: 6 weeks for pneumococcal conjugate vaccine [PCV]; 2 years for pneumococcal polysaccharide vaccine [PPSV])  
- PCV is recommended for all children aged younger than 5 years. Administer 1 dose of PCV to all healthy children aged 24 through 59 months who are not completely vaccinated for their age.  
- Administer PPSV 2 or more months after last dose of PCV to children aged 2 years or older with certain underlying medical conditions, including a coexisting ear problem. See MMWR 1997;46(No. RR-8).  

6. Inactivated poliovirus vaccine (IPV) (Minimum age: 6 weeks)  
- The final dose in the series should be administered on or after the fourth birthday and at least 6 months following the previous dose.  
- If 4 doses are administered prior to age 4 years a fifth dose should be administered at age 4 through 6 years. See MMWR 2009;58(30):629–30.  

7. Influenza vaccine (seasonal). (Minimum age: 6 months for trivalent inactivated influenza vaccine [TIV]; 2 years for live, attenuated influenza vaccine [LAIV])  
- Administer annually to children aged 6 months through 18 years.  
- For healthy children aged 2 through 6 years (i.e., those who do not have underlying medical conditions that predispose them to influenza complications), either LAIV or TIV may be used, except LAIV should not be given to children aged 2 through 4 years who have had wheezing in the past 12 months.  
- Children receiving TIV should receive 0.25 mL if aged 6 through 35 months or 0.5 mL if aged 3 years or older.  
- Administer 2 doses (separated by at least 4 weeks) to children aged younger than 9 years who are receiving influenza vaccine for the first time or who were vaccinated for the first time during the previous influenza season but only received 1 dose.  
- For recommendations for use of influenza A (H1N1) 2009 monovalent vaccine see MMWR 2009;58(No. RR-10).  

8. Measles, mumps, and rubella vaccine (MMR). (Minimum age: 12 months)  
- Administer the second dose routinely at age 4 through 6 years. However, the second dose may be administered before age 4, provided at least 28 days have elapsed since the first dose.

9. Varicella vaccine. (Minimum age: 12 months)  
- Administer the second dose routinely at age 4 through 6 years. However, the second dose may be administered before age 4, provided at least 3 months have elapsed since the first dose.  
- For children aged 12 months through 12 years the minimum interval between doses is 3 months. However, if the second dose was administered at least 28 days after the first dose, it can be accepted as valid.  

10. Hepatitis A vaccine (HepA). (Minimum age: 12 months)  
- Administer to all children aged 1 year (i.e., aged 12 through 23 months). Administer 2 doses at least 6 months apart.  
- Children not fully vaccinated by age 2 years can be vaccinated at subsequent visits  
- HepA also is recommended for older children who live in areas where vaccination programs target older children, who are at increased risk for infection, or for whom immunity against hepatitis A is desired.

11. Meningococcal vaccine. (Minimum age: 2 years for meningococcal conjugate vaccine [MCV4] and for meningococcal polysaccharide vaccine [MPSV4])  
- Administer MCV4 to children aged 2 through 10 years with persistent complement component deficiency, anatomic or functional asplenia, and certain other conditions placing them at high risk.  
- Administer MCV4 to children previously vaccinated with MCV4 or MPSV4 after 3 years if first dose administered at age 2 through 6 years. See MMWR 2009;58:1042–3.
For those who fall behind or start late, see the schedule below and the catch-up schedule.

This schedule includes recommendations in effect as of December 15, 2009. Any dose not administered at the recommended age should be administered at a subsequent visit, when indicated and feasible. The use of a combination vaccine generally is preferred over separate injections of its equivalent component vaccines. Considerations should include provider assessment, patient preference, and the potential for adverse events. Providers should consult the relevant Advisory Committee on Immunization Practices statement for detailed recommendations: [http://www.cdc.gov/vaccines/pubs/acip-list.htm](http://www.cdc.gov/vaccines/pubs/acip-list.htm). Clinically significant adverse events that follow immunization should be reported to the Vaccine Adverse Event Reporting System (VAERS) at [http://www.vaers.hhs.gov](http://www.vaers.hhs.gov) or by telephone, 800-822-7967.
1. Tetanus and diphtheria toxoids and acellular pertussis vaccine (Tdap). (Minimum age: 10 years for Boostrix and 11 years for Adacel)
   - Administer at age 11 or 12 years for those who have completed the recommended childhood DTP/DTaP vaccination series and have not received a tetanus and diphtheria toxoid (Td) booster dose.
   - Persons aged 13 through 18 years who have not received Td should receive a dose.
   - A 5-year interval from the last Td dose is encouraged when Tdap is used as a booster dose; however, a shorter interval may be used if pertussis immunity is needed.

2. Human papillomavirus vaccine (HPV). (Minimum age: 9 years)
   - Two HPV vaccines are licensed: a quadrivalent vaccine (HPV4) for the prevention of cervical, vaginal and vulvar cancers (in females) and genital warts (in females and males), and a bivalent vaccine (HPV2) for the prevention of cervical cancers in females.
   - HPV vaccines are most effective for both males and females when given before exposure to HPV through sexual contact.
   - HPV4 or HPV2 is recommended for the prevention of cervical precancers and cancers in females.
   - HPV4 is recommended for the prevention of cervical, vaginal and vulvar precancers and cancers and genital warts in females.
   - Administer the first dose to females at age 11 or 12 years.
   - Administer the second dose 1 to 2 months after the first dose and the third dose 6 months after the first dose (at least 24 weeks after the first dose).
   - Administer the series to females at age 13 through 18 years if not previously vaccinated.
   - HPV4 may be administered in a 3-dose series to males aged 9 through 18 years to reduce their likelihood of acquiring genital warts.

3. Meningococcal conjugate vaccine (MCV4).
   - Administer at age 11 or 12 years, or at age 13 through 18 years if not previously vaccinated.
   - Administer to previously unvaccinated college freshmen living in a dormitory.
   - Administer MCV4 to children aged 2 through 10 years with persistent complement component deficiency, anatomic or functional asplenia, or certain other conditions placing them at high risk.
   - Administer to children previously vaccinated with MCV4 or MPSV4 who remain at increased risk after 3 years (if first dose administered at age 2 through 6 years) or after 5 years (if first dose administered at age 7 years or older). Persons whose only risk factor is living in on-campus housing are not recommended to receive an additional dose. See MMWR 2009;58:1042–3.

4. Influenza vaccine (seasonal).
   - Administer annually to children aged 6 months through 18 years.
   - For healthy nonpregnant persons aged 7 through 18 years (i.e., those who do not have underlying medical conditions that predispose them to influenza complications), either LAIV or TIV may be used.
   - Administer 2 doses (separated by at least 4 weeks) to children aged younger than 9 years who are receiving influenza vaccine for the first time or who were vaccinated for the first time during the previous influenza season but only received 1 dose.
   - For recommendations for use of influenza A (H1N1) 2009 monovalent vaccine. See MMWR 2009;58(No. RR-10).

5. Pneumococcal polysaccharide vaccine (PPSV).
   - Administer to children with certain underlying medical conditions, including a cochlear implant. A single revaccination should be administered after 5 years to children with functional or anatomic asplenia or an immunocompromising condition. See MMWR 1997;46(No. RR-8).

6. Hepatitis A vaccine (HepA).
   - Administer 2 doses at least 6 months apart.
   - HepA is recommended for children aged older than 23 months who live in areas where vaccination programs target older children, who are at increased risk for infection, or for whom immunity against hepatitis A is desired.

7. Hepatitis B vaccine (HepB).
   - Administer the 3-dose series to those not previously vaccinated.
   - A 2-dose series (separated by at least 4 months) of adult formulation Recombivax HB is licensed for children aged 11 through 15 years.

8. Inactivated poliovirus vaccine (IPV).
   - The final dose in the series should be administered on or after the fourth birthday and at least 6 months following the previous dose.
   - If both OPV and IPV were administered as part of a series, a total of 4 doses should be administered, regardless of the child’s current age.

   - If not previously vaccinated, administer 2 doses or the second dose for those who have received only 1 dose, with at least 28 days between doses.

10. Varicella vaccine.
    - For persons aged 7 through 18 years without evidence of immunity (see MMWR 2007;56[No. RR-4]), administer 2 doses if not previously vaccinated or the second dose if only 1 dose has been administered.
    - For persons aged 7 through 12 years, the minimum interval between doses is 3 months. However, if the second dose was administered at least 28 days after the first dose, it can be accepted as valid.
    - For persons aged 13 years and older, the minimum interval between doses is 28 days.
This paper will describe the essential elements of building an effective and efficient monitoring system for regulatory compliance. There is a balancing of both effectiveness and efficiency that need to be conjoined as state administrators think about how best to monitor human services. A basic assumption of this paper is that effectiveness and efficiency are tied together in a deep structure and are not two independent values.

The prevailing theory of the relationship of effective and efficient monitoring systems is based upon a linear relationship between the two. The best monitoring system is one that is both effective and efficient. And this is true up to a point. An alternate theory or paradigm for thinking about this relationship is that as one moves up the efficiency scale, effectiveness will begin to slide as we move from highly efficient systems to the most efficient systems where very few rules are reviewed (see the below figure 1 for a depiction of this relationship). Within the human service regulatory administration and compliance field is the move to more abbreviated inspections in which fewer rules are reviewed. These abbreviated inspections are based upon risk assessment and key indicator methodologies.

As state administrators of regulatory compliance systems there is the need to find the “sweet spot”, the balance between having both an effective and efficient monitoring system. Finding the correct number
of rules to monitor is a difficult decision. Especially in the present focus on de-regulation. We need to be careful to “not throw the baby out with the bath water”, so to speak, in public policy terms. The above relationship as depicted in Figure 1 has been discovered in repeated studies by the author in all forms of human service licensing and regulatory administration and compliance studies, such as child residential, adult residential, and early care and education (see Figure 2 below).

An alternate way of looking at effectiveness and efficiency is depicted in Figure 3 below. In this depiction, both values are placed within the same graphic in order to determine how they interact with each other. The key to this Intersection of Effectiveness and Efficiency is determining the balance point where one can find the most effective and efficient monitoring system. For state administrators responsible for regulatory administration, it is always difficult to find the correct balance of oversight in a system that is operated with limited resources. There is always pressure to make the most out of limited resources. But with that said, everyone needs to be certain that in the quest for efficiencies we do not really begin to jeopardize effectiveness.
The purpose of this paper is to demonstrate an alternate paradigm in thinking about the relationship between effectiveness and efficiency as it relates to program monitoring within a regulatory administration and compliance setting. What are some of the key tenets in deciding upon a monitoring system that will meet the needs of all clients who are receiving various human services without jeopardizing their overall health and safety which is the essence of effectiveness.

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Three Things We Have Learned about Key Indicators, Risk Assessments, and Differential Monitoring

Richard Fiene, Ph.D.

April 2018

After 40+ years of research regarding the Key indicator, Risk Assessment and Differential Monitoring methodologies in human service regulatory administration, there are certain consistencies that have been noted over the years. I have highlighted some of these in Technical Research Notes (please see http://RIKInstitute.com) in the past but there are three that I feel are so significant that I wanted to review them here together.

One, in creating the data base for Key Indicators, the best model for sorting the program licensing scores is to compare the top 25% to the bottom 25% while eliminating the middle 50% of the programs that fall within this range. Some states have used the top 50% and the bottom 50% as the sorting schema. In making comparisons utilizing the various data sorting models, the 25%/25% model always performed the best.

Two, in most studies that involved both program compliance data and program quality data, Key indicator and Risk Assessment Rules correlated significantly with ERS and CLASS scores. This is an important finding because one of the reasons for doing abbreviated monitoring inspections such as Key Indicator or Risk Assessment Reviews is to establish a balance between program compliance as measured via licensing and program quality as measured via ERS or CLASS usually within a QRIS protocol.

Three, there appears to be little to no significance to the number of rules within a Key Indicator Tool. It performs well with fewer than 10 rules as well as in cases where there are more rules present in the tool. It is more important what the Key Indicator Rules are than the number. However, with that said, obviously the more rules one has the less efficient the process becomes because you are reviewing more rules than may be warranted.

I thought it important to share these three short thoughts with you regarding the trends I have noticed over the past 40+ years of doing research into Key Indicator, Risk Assessment and Differential Monitoring within human services and early care and education regulatory compliance, licensing, program quality and professional development systems.

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The purpose of this paper is to provide guidance to regulatory administrators in decision making regarding the Key Indicator Methodology. A 2 x 2 Matrix will be used to demonstrate the key decisions that need to be made with various caveats and examples. Key Indicator Systems for Licensing have been used in states for many years now; this paper hopefully will provide a framework for the difficult decision making when it comes to moving from an abbreviated monitoring inspection to a full comprehensive monitoring inspection.

The basic KIS Decision Making 2 x 2 Matrix to be employed throughout this paper is the following format:

<table>
<thead>
<tr>
<th>KIS Decision Making Matrix</th>
<th>Overall Low Compliance (L)</th>
<th>Overall High Compliance (H)</th>
</tr>
</thead>
<tbody>
<tr>
<td>KI Rule is Not In-Compliance (NC)</td>
<td>L+NC = Desirable</td>
<td>H+NC = False Negative</td>
</tr>
<tr>
<td>KI Rule is In-Compliance (C)</td>
<td>L+C = False Positive</td>
<td>H+C = Desirable</td>
</tr>
</tbody>
</table>

The above 2 x 2 Matrix provides the basic decision making in a licensing key indicator system. We want to find a rule that statistically predicts overall high compliance when it is in-compliance (H+C) and when it is not in-compliance it predicts overall low compliance with all rules (L+NC). Less favorable are rules that are in-compliance but predict overall low compliance (L+C) and worse of all is when the rule is not in-compliance but statistically predicts high overall compliance with all rules (H+NC). In the KIS Decision Making Matrix we should always find \((L+NC) + (H+C) > (H+NC) + (L+C)\). \((H+NC)\) should be zero (0) or as close to zero. Both \((L+NC)\) and \((H+C)\) should be the highest populated cells in the matrix. Generally because of the nature of rules, \((L+C)\) is usually well populated as well which is not necessarily a bad thing but it can lead to inefficiencies which will help to defeat the purpose of the Key Indicator Methodology’s cost efficiency.

Examples of the above may help to make this more straightforward for decision making:

Example 1:

<table>
<thead>
<tr>
<th>KIS Decision Making Matrix</th>
<th>Overall Low Compliance</th>
<th>Overall High Compliance</th>
</tr>
</thead>
<tbody>
<tr>
<td>KI Rule is Not In-Compliance</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>KI Rule is In-Compliance</td>
<td>59</td>
<td>44</td>
</tr>
</tbody>
</table>
Example 1 demonstrates a non-significant relationship within the KIS Decision Making Matrix where there is no relationship between this particular rule and its ability to predict overall regulatory compliance. It would not be recommended as a Key Indicator Rule.

Example 2:

<table>
<thead>
<tr>
<th>KIS Decision Making Matrix</th>
<th>Overall Low Compliance</th>
<th>Overall High Compliance</th>
</tr>
</thead>
<tbody>
<tr>
<td>KI Rule is Not In-Compliance</td>
<td>5</td>
<td>0</td>
</tr>
<tr>
<td>KI Rule is In-Compliance</td>
<td>55</td>
<td>44</td>
</tr>
</tbody>
</table>

In Example 2, this rule reaches significance (\(\phi = .19; p < .05\)) in being able to predict overall compliance because now when the rule is not In-Compliance it predicts overall low compliance, and continues when the rule is In-Compliance to predict overall high compliance. However, there are still a number of False Positives (\(n = 55\)) where when the Rule is In-Compliance it is predicting overall low compliance. This can lead to monitoring additional programs that don’t necessarily need additional in-depth monitoring which goes counter to the purposed of the Key Indicator Methodology. But this is a fact of life with licensing data, most programs are in compliance with the majority of their rules.

Example 3:

<table>
<thead>
<tr>
<th>KIS Decision Making Matrix</th>
<th>Overall Low Compliance</th>
<th>Overall High Compliance</th>
</tr>
</thead>
<tbody>
<tr>
<td>KI Rule is Not In-Compliance</td>
<td>24</td>
<td>3</td>
</tr>
<tr>
<td>KI Rule is In-Compliance</td>
<td>39</td>
<td>41</td>
</tr>
</tbody>
</table>

Example 3 provides an interesting dilemma in that it is more highly significant (\(\phi = .33; p < .001\)) than Example 2, but introduces three 3 False Negatives where the program is in the High Compliance Group but the specific Rule is Not In-Compliance.

Example 4:

<table>
<thead>
<tr>
<th>KIS Decision Making Matrix</th>
<th>Overall Low Compliance</th>
<th>Overall High Compliance</th>
</tr>
</thead>
<tbody>
<tr>
<td>KI Rule is Not In-Compliance</td>
<td>50</td>
<td>0</td>
</tr>
<tr>
<td>KI Rule is In-Compliance</td>
<td>0</td>
<td>44</td>
</tr>
</tbody>
</table>

Example 4 provides a perfect relationship (\(\phi = 1.00; p < .0001\)) between the KI rule and the overall compliance level. The KI rule is always not In-Compliance with the overall low compliance programs and always In-Compliance with the overall high compliance programs. The problem is this KI rule just does not exist in the licensing field. It does in the program quality (QRIS) arena utilizing ERS data but not in licensing and regulatory administration.

So where does this leave the regulatory licensing administrator in making decisions with the Key Indicator Methodology. When should one move from an abbreviated monitoring inspection to a full monitoring inspection? When should a rule become a key indicator? The answer depends on the tolerance for false negatives I feel. Any licensing administrator must be concerned when the false negatives are beginning to populate the matrix.
The purpose of this paper is to help regulatory licensing administrators decide when to use Key Indicators/Abbreviated Inspections and when to use Comprehensive Monitoring Inspections. In the past, phi coefficients were used as the determining factor without regard for False Negatives. Based on the past 40 years of research into Key indicators’ Methodology, I think a closer look at the Matrix data is warranted rather than a strict threshold determination using phi coefficients.

Based upon this need to look more closely at the False Positives and Negatives, it is highly recommended to use a top 25% and a bottom 25% for the High and Low Compliance Groups rather than a 50%/50% separation. The 25%/25% breakout is a much better model. And lastly, once the Key Indicators (KI) are in place, run a correlation and scatterplot of the KI with the Comprehensive Instrument (CI) to see how the data display. A very high correlation (r = .75+) should be observed in the comparison of KI and CI. This is the last step in order to validate the use of the KI as an efficient and effective abbreviated instrument that statistically predicts overall compliance via the Comprehensive Instrument (CI).

Richard Fiene, Ph.D., Senior Research Psychologist, Research Institute for Key Indicators; Professor of Psychology (retired), Penn State University; and NARA Senior Consultant. Rijf8@psu.edu. http://RIKInstitute.com.
The Implications in Regulatory Compliance Measurement When Moving from Nominal to Ordinal Scaling

Richard Fiene, Ph.D.

May 2018

The purpose of this paper is to provide an alternate paradigm for regulatory compliance measurement in moving from a nominal to an ordinal scale measurement strategy. Regulatory compliance measurement is dominated by a nominal scale measurement system in which rules are either in compliance or out of compliance. There are no gradients for measurement within the present licensing measurement paradigm. It is very absolute. Either a rule is in full compliance to the letter of the law or the essence of the regulation or it is not. An alternate paradigm borrowing from accreditation and other program quality systems is to establish an ordinal scale measurement system which takes various gradients of compliance into account. With this alternate paradigm, it offers an opportunity to begin to introduce a quality element into the measurement schema. It also allows to take into consideration both risk and prevalence data which are important in rank ordering specific rules.

So how would this look from a licensing decision making vantage point. Presently, in licensing measurement, licensing decisions are made at the rule level in which each rule is either in or out of compliance in the prevailing paradigm. Licensing summaries with corrective actions are generated from the regulatory compliance review. It is a nominal measurement system being based upon Yes/No responses. The alternate measurement paradigm I am suggesting in this paper is one that is more ordinal in nature where we expand the Yes/No response to include gradients of the particular rule. In the next paragraph, I provide an example of a rule that could be measured in moving from a nominal to ordinal scale measurement schema.

Rather than only measuring a rule in an all or none fashion, this alternate paradigm provides a more relative mode of measurement at an ordinal level. For example, with a professional development or training rule in a particular state which requires, let’s say, 6 hours of training for each staff person. Rather than having this only be 6 hours in compliance and anything less than this is out of compliance, let’s have this rule be on a relative gradient in which any amount of hours above the 6 hours falls into a program quality level and anything less than the 6 hours falls out of compliance but at a more severe level depending on how far below the 6 hours and how many staff do not meet the requirement (prevalence). Also throw in a specific weight which adds in a risk factor and we have a paradigm that is more relative rather than absolute in nature.

From a math modeling perspective, the 1 or 0 format for a Yes or No response becomes -2, -1, 0, +1, +2 format. This is more similar to what is used in accreditation systems where 0 equals Compliance and -1 and -2 equals various levels of Non-Compliance in terms of severity and/or prevalence. The +1 and +2 levels equal value added to the Compliance level by introducing a Quality Indicator. This new formatting builds upon the compliance vs non-compliance dichotomy (C/NC) but now adds a quality indicator (QI) element. By adding this quality element, we may be able to eliminate or at least lessen the non-linear relationship between regulatory compliance with rules and program quality scores as measured by the
Environmental Rating Scales (ERS) and CLASS which is the essence of the Theory of Regulatory Compliance (TRC). It could potentially make this a more linear relationship by not having the data as skewed as it has been in the past.

By employing this alternate paradigm, it is a first demonstration of the use of the Key Indicator Methodology in both licensing and quality domains. The Key Indicator Methodology has been utilized a great deal in licensing but in few instances in the program quality domain. For example, over the past five years, I have worked with approximately 10 states in designing Licensing Key Indicators but only one state with Quality Key Indicators from their QRIS – Quality Rating and Improvement System. This new paradigm would combine the use in both. It also takes advantage of the full ECPQI2M – Early Childhood Program Quality Improvement and Indicator Model by blending regulatory compliance with program quality standards.

A major implication in moving from a nominal to an ordinal regulatory compliance measurement system is that it presents the possibility of combining licensing and quality rating and improvement systems into one system via the Key Indicator Methodology. By having licensing indicators and now quality indicators that could be both measured by licensing inspectors, there would be no need to have two separate systems but rather one that applies to everyone and becomes mandated rather than voluntary. It could help to balance both effectiveness and efficiency by only including those standards and rules that statistically predict regulatory compliance and quality and balancing risk assessment by adding high risk rules.

I will continue to develop this scale measurement paradigm shift in future papers but wanted to get this idea out to the regulatory administration field for consideration and debate. This will be a very controversial proposal since state regulatory agencies have spent a great deal of resources on developing free standing QRIS which build upon licensing systems. This alternate paradigm builds off my Theory of Regulatory Compliance’s key element of relative vs absolute measurement and linear vs non-linear relationships. Look for additional information about this on my website RIKI Institute Blog - https://rikinstitute.com/blog/.

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Richard Fiene, Ph.D., Senior Research Psychologist, Research Institute for Key Indicators; Professor of Psychology (retired), Penn State University; and NARA Senior Research Consultant. Rjf8@psu.edu. http://RIKInstitute.com.
In dealing with regulatory compliance data distributions, one is always impressed with the skewness of the data distribution. This is a major disadvantage of working with these data distributions because it eliminates utilizing parametric statistics. These shortcomings have been dealt with in the past by using non-parametric statistics, the dichotomization of data distributions, moving from a nominal to ordinal scaling, and risk assessment/weighting. These adjustments have been successful in helping to analyze the data but are not ideal and will never approach a normally distributed curve. However, that is not the intent of regulatory compliance data, the data distribution should demonstrate a good deal of skewness because these data are demonstrating protections for clients and not quality services. One would not want the data to be normally distributed.

This short paper/technical research note delineates the state of the art with an international regulatory compliance data base that has been created over the past 40 years at the Research Institute for Key Indicators (RIKII LLC). In it, I provide basic descriptive statistics to demonstrate to other researchers the nature of the data distributions so that they can be aware of the shortcomings of the data when it comes to statistical analyses. I have employed various scaling methods to help with the skewness of the data but it still does not approximate normally distributed data. This will be self-evident in the data displays.

<table>
<thead>
<tr>
<th></th>
<th>KI</th>
<th>PQ</th>
<th>RC</th>
<th>PQ 1-5</th>
<th>RC 1-5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>1.68</td>
<td>3.42</td>
<td>5.51</td>
<td>2.96</td>
<td>3.48</td>
</tr>
<tr>
<td>SD</td>
<td>1.61</td>
<td>0.86</td>
<td>5.26</td>
<td>0.90</td>
<td>1.43</td>
</tr>
<tr>
<td>Sum</td>
<td>175</td>
<td>348</td>
<td>573</td>
<td>302</td>
<td>362</td>
</tr>
<tr>
<td>Variance</td>
<td>3.61</td>
<td>0.74</td>
<td>27.63</td>
<td>0.81</td>
<td>2.06</td>
</tr>
<tr>
<td>Range</td>
<td>6.00</td>
<td>4.11</td>
<td>25.00</td>
<td>4.00</td>
<td>4.00</td>
</tr>
<tr>
<td>Minimum</td>
<td>0</td>
<td>1.86</td>
<td>0</td>
<td>1.00</td>
<td>1.00</td>
</tr>
<tr>
<td>Maximum</td>
<td>6.00</td>
<td>5.97</td>
<td>25.00</td>
<td>5.00</td>
<td>5.00</td>
</tr>
<tr>
<td>SE Mean</td>
<td>0.16</td>
<td>0.09</td>
<td>0.52</td>
<td>0.09</td>
<td>0.14</td>
</tr>
<tr>
<td>Kurtosis</td>
<td>0.073</td>
<td>-0.134</td>
<td>2.112</td>
<td>-0.388</td>
<td>-1.097</td>
</tr>
<tr>
<td>Skewness</td>
<td>0.898</td>
<td>0.467</td>
<td>1.468</td>
<td>0.327</td>
<td>-0.494</td>
</tr>
</tbody>
</table>
Legend:

KI = Key Indicators

PQ = Program Quality (ERS Scale)

RC = Regulatory Compliance (State Comprehensive Review Checklist)

PQ 1-5 = Program Quality using 1-5 scale

RC 1-5 = Regulatory Compliance using 1-5 scale (1 = Low RC; 2-4 = Med Level RC; 5 = High/Substantial RC)

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There is a lack of empirical demonstrations of regulatory compliance decision making. In the past, I have used the methodologies of key indicators, risk assessment and the resultant differential monitoring techniques of how often and what should be reviewed for decision making. What has not been addressed is decision making based upon comprehensive reviews when all regulations are assessed. This short paper will address how empirical evidence taken from the past 40+ years of establishing and researching a national data base for regulatory compliance can help lead us to a new scaling of regulatory compliance decision making.

In analyzing regulatory compliance data it becomes perfectly clear that the data have very little variance and are terribly skewed in which the majority of programs are in either full or substantial compliance with all the respective regulations. Only a small handful of programs fall in the category of being in low compliance with all the regulations.

The proposed scaling has three major decision points attached to regulatory compliance scores. Either programs are in full or substantial compliance, in low compliance or somewhere in the middle. Full or substantial regulatory compliance is 100% or 99-98% in regulatory compliance. Low regulatory compliance is less than 90% and mid-regulatory compliance is between 97%-90%. These ranges may seem exceptionally tight but based upon the national data base on regulatory compliance that I maintain at the Research Institute for Key Indicators (RIKILLC) these are the ranges that have formed over the past 40 years. These data ranges should not come as a surprise because we are talking about regulatory compliance with health and safety standards. These are not quality standards, these are basic protections for clients. The data are not normally distributed, not even close as is found in quality tools and standards.

What would a **Regulatory Compliance Decision-Making Scale** look like:

<table>
<thead>
<tr>
<th>Data</th>
<th>Level</th>
<th>Decision</th>
</tr>
</thead>
<tbody>
<tr>
<td>100-98%</td>
<td>Full/Substantial</td>
<td>License</td>
</tr>
<tr>
<td>97-90%</td>
<td>Mid-Range</td>
<td>Provisional License</td>
</tr>
<tr>
<td>89% or less</td>
<td>Low</td>
<td>No-License</td>
</tr>
</tbody>
</table>

States/Provinces/Jurisdictions may want to adjust these levels and the scaling based upon their actual data distribution. For example, I have found certain jurisdictions to have a very unusually skewed data distributions which means that these ranges need to be tighten even more. If the data distribution is not as skewed as the above scale than these ranges may need to be more forgiving.
This regulatory compliance decision making scale does not take into account if abbreviated methodologies are used, such as risk assessment or key indicator models that are used in a differential monitoring approach. The above scale is to be used if a jurisdiction decides not to use a differential monitoring approach and wants to measure regulatory compliance with all regulations and complete comprehensive reviews.

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Three models are presented here which depict the theory of regulatory compliance as it has evolved over the past four decades. Initially, it was thought that there was a linear relationship between regulatory compliance and program quality as depicted in the first line graph below (see Figure 1). As compliance increased a corresponding increase in quality would be seen in the respective programs.

This initial graphic needed to be modified because of various studies conducted in order to confirm this regulatory compliance theory. It was discovered that at the lower ends of regulatory compliance there still was a linear relationship between compliance and quality. However, as the compliance scores continued to increase to a substantial level of compliance and then finally to full (100%) compliance with all rules, there was a corresponding drop off in quality as depicted in the second line graph below (see Figure 2).
This Non-Linear Model has worked well in explaining the Theory of Regulatory Compliance and the studies conducted for the past three decades. However, the most recent studies related to the theory appear to be better explained by the latest proposed model in Figure 3 which suggests using a Stepped or Tiered Model rather than a Non-Linear Model. The Stepped/Tiered Model appears to explain more fully how certain less important rules can be significant predictors of overall compliance and quality.
This last model (Stepped/Tiered) has more flexibility in looking at the full regulatory field in attempting to find the “predictor” or right rules that should be selected as key indicators. It is about identifying those key indicator rules that move the needle from one step/tier to the next rather than focusing on the plateau. So rather than having just one plateau, this model suggests that there are several plateaus/tiers.

Mathematically, the three models appear as the following:

1) \( PQ = a \cdot (PC) + b \)  \hspace{0.5cm} (Linear)
2) \( PQ = a \cdot (PC)^b \)  \hspace{0.5cm} (Non-Linear)
3) \( PQ = a + \frac{(b - a)}{(1 + (PC / b)^b)} \)  \hspace{0.5cm} (Stepped/Tiered)

Where \( PQ \) = Program Quality; \( PC \) = Regulatory Program Compliance; \( a \) and \( b \) are regulatory constants.

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The Evolution of Differential Monitoring With the Risk Assessment and Key Indicator Methodologies

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Research Institute for Key Indicators (RIKIlc)
The Pennsylvania State University
National Association for Regulatory Administration (NARA)
December 2018

The use of differential monitoring by states and Canadian Provinces has evolved very interestingly over the past decade into two parallel approaches which help to inform other interested jurisdictions as they consider a differential monitoring approach.

Differential monitoring is a more targeted or abbreviated form of monitoring facilities or programs based upon “what is reviewed/depth of the review” and “how often/frequent do we review”. Two specific methodologies have been used by states to design and implement a differential monitoring approach: risk assessment and key indicators.

It was originally conceived that risk assessment and key indicator methodologies would be used in tandem and not used separately. Over the past decade, a real dichotomy has developed in which risk assessment has developed very independently of key indicators and risk assessment has become the predominant methodology used, while the key indicator methodology has lagged behind in development and implementation.

In this separate development and implementation, risk assessment has driven the “how frequent” visits in a differential monitoring approach while key indicators has driven “what is reviewed” when it comes to rules/regulations/standards.

The other development with both methodologies are the data matrices developed to analyze the data and to make decisions about frequency and depth of reviews. For risk assessment, the standard matrix used is a 3 x 3 matrix similar to the one presented below.

<table>
<thead>
<tr>
<th></th>
<th>A</th>
<th>B</th>
<th>C</th>
</tr>
</thead>
<tbody>
<tr>
<td>D</td>
<td></td>
<td>E</td>
<td>F</td>
</tr>
<tr>
<td>G</td>
<td></td>
<td>H</td>
<td>I</td>
</tr>
</tbody>
</table>

*Risk Assessment with Probability along the vertical axis and Risk along the horizontal axis*

In the above 3 x 3 Risk Assessment Matrix, (A) indicates a very high risk
rule/regulation/standard with a high likelihood that it will occur, while (I) indicates a very low or no risk rule/regulation/standard with a low likelihood that it will occur. (B) through (H) indicate various degrees of risk and probability based upon their position within the Matrix.

The decision making relationship of more frequent visits to the facility or program is made on the following algorithm:

\[
\text{If } I > E + F + H > B + C + D + G > A, \text{ than more frequent reviews are completed}
\]

Just as Risk Assessment utilizes a 3 x 3 Matrix, Key Indicators utilizes a 2 x 2 Matrix in order to analyze the data and make decisions about what is reviewed. Below is an example of a 2 x 2 Matrix that has been used.

\[
\begin{array}{cc}
A & B \\
C & D \\
\end{array}
\]

In the above 2 x 2 Key Indicator Matrix, (A) indicates a rule/regulation/standard that is in compliance and in the high compliant group, while (D) indicates a rule/regulation/standard that is out of compliance and in the low compliant group. (B) and (C) indicate false positive and negatives.

The decision making relationship of more rules to be reviewed is made on the following algorithm:

\[
\text{If } A + D > B + C, \text{ than a more comprehensive review is completed}
\]

Given the interest in utilizing differential monitoring for doing monitoring review, having this decade's long review of how the risk assessment and key indicator methodologies have evolved is an important consideration.

Is it still possible to combine the risk assessment and key indicator methodologies? It is by combining the 3 x 3 and 2 x 2 Matrices above where the focus of utilizing the Key Indicator methodology is (I) cell of the 3 x 3 Matrix. It is only here that the Key Indicator methodology can be used when combined with the Risk Assessment methodology.
**Key Indicator and Risk Assessment Methodologies Used in Tandem**

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
<th>C</th>
</tr>
</thead>
<tbody>
<tr>
<td>D</td>
<td>E</td>
<td>F</td>
</tr>
<tr>
<td>G</td>
<td>H</td>
<td>Only Use Key Indicators here</td>
</tr>
</tbody>
</table>

By utilizing the two methodologies in tandem, both frequency of reviews and what is reviewed are dealt with at the same time which makes the differential monitoring approach more effective and efficient.

_______________________________________________________________
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Theory of Regulatory Compliance: Quadratic Regressions

Richard Fiene, Ph.D.

December 2018

The Theory of Regulatory Compliance has been described mathematically as a quadratic formula which captured the non-linear, U-shaped curve relating regulatory compliance and program quality. The form of the equation followed the typical quadratic:

\[ Y = ax^2 + bx + c \]

The problem in the use of the quadratic formula was that it was not particularly sensitive to false positives and negatives which in the regulatory compliance decision making was very problematic. Most recently, an alternative mathematical approach has been introduced by Simonsohn (2018) in his article: Two Lines: A Valid Alternative to the Invalid Testing of U-Shaped Relationships With Quadratic Regressions:

\[ y = a + bx_{\text{low}} + cx_{\text{high}} + d * \text{high} + ZBZ, \] (1)
where \( x_{\text{low}} = x - xc \) if \( x < xc \) and 0 otherwise, \( x_{\text{high}} = x - xc \) if \( x \geq xc \) and 0 otherwise, and \( \text{high} = 1 \) if \( x \geq xc \) and 0 otherwise.

\( Z \) is the (optional) matrix with covariates, and \( BZ \) is its vector of coefficients.

This article appeared in Advances in Methods and Practices in Psychological Science, Vol.1(4) 538–555, DOI: 10.1177/2515245918805755, www.psychologicalscience.org/AMPPS. This alternative approach is provided to better explain and detail the Theory of Regulatory Compliance. This very brief RIKIllc technical research note is provided for licensing and regulatory science researchers to consider as they make comparisons with their regulatory compliance data. Additional details will be provided as this alternative to quadratic regressions is applied to the ECPQI2M – Early Childhood Program Quality Improvement and Indicator Model International Data Base maintained at the Research Institute for Key Indicators (RIKIIlc).

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For additional information about the Theory of Regulatory Compliance and the Early Childhood Program Quality Improvement and Indicator Model, please go to http://RIKInstitute.com
What is the Relationship between Regulatory Compliance and Complaints in a Human Services Licensing System? RIKIIIc Technical Research Note

Richard Fiene, Ph.D.

January 2019

Within licensing measurement and the validation of licensing systems it is particularly difficult to have specific outcome metrics that can be measured within a human services licensing system. The purpose of this technical research note is to propose a potential solution to this problem.

Probably the most accurate measures of licensing outcomes focuses on improvements in the health and safety of clients within human services licensed facilities, such as: fewer injuries (safety) or higher levels of immunizations (health). Another measure related to client satisfaction is the number of complaints reported about a licensed facility by clients and the general public. The advantage of using complaints is that this form of monitoring is generally always part of an overall licensing system. In other words, the state/provincial licensing agency is already collecting these data. It is just a matter of utilizing these data in comparing the number of complaints to overall regulatory compliance.

The author had the opportunity to have access to these data, complaint and regulatory compliance data in a mid-Western state which will be reported within this technical research note. There are few empirical demonstrations of this relationship within the licensing research literature. The following results are based upon a very large sample of family child care homes (N = 2000+) over a full year of licensing reviews.

The results of comparing the number of complaints and the respective regulatory compliance levels proved to show a rather significant relationship \( r = .47; p < .0001 \). This result is the first step in attempting to understand this relationship as well as developing a methodology and analysis schema since directionality (e.g., did the complaint occur before or after the regulatory compliance data collection?) can play a key role in the relationship (this will be developed more fully in a future technical research note). The focus of this research note was to determine if any relationship existed between regulatory compliance and complaint data and if it is worth pursuing.

It appears that looking more closely at the relationship between complaint and regulatory compliance data is warranted. It may provide another means of validating the fourth level of
validation studies as proposed by Zellman and Fiene’s OPRE Research Brief (Zellman, G. L. & Fiene, R. (2012). Validation of Quality Rating and Improvement Systems for Early Care and Education and School-Age Care, Research-to-Policy, Research-to-Practice Brief OPRE 2012-29. Washington, DC: Office of Planning, Research and Evaluation, Administration for Children and Families, U.S. Department of Health and Human Services) in which four approaches to validation are delineated for Quality Rating and Improvement Systems (QRIS). This author has taken this framework and applied it to licensing systems (Fiene (2014). Validation of Georgia’s Core Rule Monitoring System, Georgia Department of Early Care and Learning) and more recently proposed as the framework for Washington State’s Research Agenda (Stevens & Fiene (2018). Validation of the Washington State’s Licensing and Monitoring System, Washington Department of Children, Youth, and Families).

For additional information regarding the above studies, the interested reader should go to http://RIKInstitute.com.

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As promised in RIKIlc Technical Research Note #65, this Note will provide details on the methodology and analytical considerations when using complaint and regulatory compliance data together. As pointed out in the previous technical research note, using complaint data as a potential outcome appears to have merit and should be explored in greater detail. However, with that said there are some parameters that the methodology has that should be explored in order to make the analyses more meaningful.

When looking at regulatory compliance and complaint data there are four possibilities: 1) the facility is in full compliance and has no complaints; 2) the facility is in full compliance but has complaint(s); 3) the facility has some non-compliance and has no complaints; and 4) the facility has some non-compliance and has complaint(s). These four possibilities can be depicted in the following 2 x 2 matrix:

<table>
<thead>
<tr>
<th>Complaints</th>
<th>Regulatory Compliance</th>
<th>Regulatory Compliance</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Full (0)</td>
<td>Non-Compliance (1)</td>
</tr>
<tr>
<td>No (0)</td>
<td>00 = Full &amp; No</td>
<td>10 = Non-Compliance &amp; No</td>
</tr>
<tr>
<td></td>
<td>Cell C = Expected</td>
<td>Cell B = False Positive</td>
</tr>
<tr>
<td>Yes (1)</td>
<td>01 = Full &amp; Yes</td>
<td>11 = Non-Compliance &amp; Yes</td>
</tr>
<tr>
<td></td>
<td>Cell A = False Negative</td>
<td>Cell D = Expected</td>
</tr>
</tbody>
</table>

In the above 2 x 2 matrix, we would want to see cell C and cell D as the predominant cells and cell A and B as the less dominant cells, especially cell A because this represents a false negative result.

However, there are a couple of limitations to the above matrix that need to be taken into account. One, are the complaints substantiated or not. Any complaint must be substantiated to be counted in the model. If it is unsubstantiated, than it is not counted in the matrix. Two, there is the problem with directionality that needs to be addressed. For example, does the complaint occur before or after the full inspection in order to determine regulatory compliance. The 2 x 2 matrix and the modeling for these analyses is based on the complaint occurring after the full inspection and that is the reason for cell A being labeled a false negative. If the directionality is reversed and the full inspection occurs after a complaint, cell A is no longer a false negative.
The frequency or data distributions for licensing (lic), quality rating and improvement systems (QRIS), and environmental rating scales (ERS) are very different. ECE programs obtain very different scores in each of these assessment paradigms. This should not come as a surprise since the three assessments measure very different aspects of an ECE program: Licensing = health and safety standards; QRIS = quality standards; ERS = environmental quality. However, the statistical implications are important given these differences. The distributions are depicted in the graphic below (Data Distributions: Licensing, QRIS, ERS).

Additional notes regarding the above graphic. The licensing distribution clearly shows a highly skewed data distribution, while the ERS distribution is normally distributed, while the QRIS is bi-modal and the QRISAll which represents all providers in a state who are part of the QRIS and those who are not is highly skewed. One (1) = higher scores; 5 = lower scores.

The hope is that the above graphic will assist licensing researchers as they think about analyzing data from each of these respective systems when it comes to parametric and non-parametric statistics.
Over the past couple of decades there has been many early care and education initiatives, such as Quality Rating and Improvement Systems (QRIS), Professional Development, Training, Technical Assistance, Accreditation, and Pre-K programs to just name a few. Validation and evaluation studies have begun to appear in the research literature, but in these studies there has been few empirical demonstrations of the relationship between these various quality initiatives and their impact on regulatory compliance or a comparison to their respective regulatory compliance. This brief technical research note will provide examples of these comparisons taken from the Early Childhood Program Quality Improvement and Indicator Model (ECPQI2M) Data Base maintained at the Research Institute for Key Indicators (RIKIlle).

I have written about this back in 2014 (Fiene, 2014) in how the various quality initiatives were having a positive impact on the early care and education delivery system but at that point regulatory compliance data were not available. Today, in 2019, with many changes and developments in state data systems, this is no longer the case. Now it is possible to explore the relationships between data from the various quality initiatives and licensing. Several states in multiple service delivery systems have provided replicable findings in which I feel comfortable reporting out about the relationships across the data systems.

What we now know is that there is a positive and statistically significant relationship between regulatory compliance and moving up the QRIS Quality Levels. In other words, facilities have higher compliance in the higher QRIS Quality Levels and lower compliance in the lower QRIS Levels or if they do not participate in their state’s respective QRIS (F = 5.047 – 8.694; p < .0001).

Other quality initiatives, such as being accredited, shows higher compliance with licensing rules than those facilities that are not accredited (t = 2.799 - 3.853; p < .005 - .0001).

This is a very important result clearly demonstrating the positive relationship between regulatory compliance and quality initiatives. I have some additional state data sets that I will add to the ECPQI2M data base and will continue to analyze these relationships.
Effectiveness and Efficiency Relationship Leading to Cost Benefit  
Richard Fiene, Ph.D.  
March 2019

In management science and economic theory in general, the relationship between effectiveness and efficiency has been delineated in terms of two mutually exclusive processes in which you have one but not the other. This brief technical research note will outline an approach which mirrors the relationship in economics between supply and demand and how effectiveness and efficiency can be thought of as images of each other giving way to cost benefit analysis in order to have the proper balance between the two.

The proposed relationship between effectiveness and efficiency is that as one increases the other decreases in a corresponding and proportionate way as depicted in the graphic below. This relationship is drawn from my work in regulatory compliance/licensing systems in comparing data collected in comprehensive licensing reviews and abbreviated licensing reviews where only a select group of rules/regulations are measured. When comprehensive reviews are completed these reviews tend to be more effective but not very efficient use of resources. When abbreviated reviews are completed these reviews tend to be more efficient but are not as effective if too few rules are measured for compliance.

Effectiveness & Efficiency Relationship

Effectiveness deals with the quality of outputs while efficiency deals with input of resources expended. The Theory of Regulatory Compliance is finding the right balance between
effectiveness and efficiency in the above graphic. Where is the balanced “sweet” spot of inputs to produce high quality outputs. As one can see where the effectiveness line is at the highest point and efficiency is at the lowest point, this is a very costly system that is totally out of balance. But the same is true where efficiency is at the highest point and effectiveness is at the lowest point, this is a very cheap system that is totally out of balance producing low quality. The key to this relationship and the theory of regulatory compliance is finding that middle ground where effectiveness and efficiency are balanced and produce the best results for cost and quality and leads us directly to cost benefit analysis.

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Research Institute for Key Indicators (RIKI)l Technical Research Note #70.
There is a relationship between general regulatory compliance levels, weights and how these work within the risk assessment and key indicator differential monitoring approaches. What generally happens is that there are high compliance levels with high risk assessment/weighted rules and with moderate weighted rules and low compliance levels with more low weighted rules which led to the Theory of Regulatory Compliance and an emphasis on substantial regulatory compliance. This is a general pattern and there are exceptions to every rule. Please see the chart below which depicts this relationship.

The reason for pointing this relationship out is for policy makers and researchers to be cognizant of these relationships and to be alert for when certain rules do not follow this pattern. Regulatory compliance data are very quirky data and because of its non-parametric characteristics can be difficult to analyze. I know that these results and relationships may seem self-evident, but they need emphasis because it is easy to overlook the obvious and to miss "the forest in looking at the trees".

<table>
<thead>
<tr>
<th>Compliance</th>
<th>Weights</th>
<th>Approach</th>
<th>Violation of Approach</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>High</td>
<td>Risk Assessment Rules</td>
<td>Low Compliance with Rule</td>
</tr>
<tr>
<td>High - Medium</td>
<td>Medium</td>
<td>Key Indicator Rules</td>
<td>False Negatives</td>
</tr>
<tr>
<td>Medium</td>
<td>Low</td>
<td>Substantial Compliance</td>
<td>100% Compliance with all Rules</td>
</tr>
</tbody>
</table>

Let's walk through this chart.

High compliance means being in compliance with all or a substantial number of rules, but always keep in mind that when we are discussing regulatory compliance, being in high compliance means 100% - 99% in compliance with all rules. This is a very high standard and most programs can achieve these levels.

Medium compliance is still rather high regulatory compliance (98% - 97%) and is generally considered a high enough level for issuing a full license with a brief plan of correction. This is a level that is considered legally to be in substantial compliance with all rules. This regulatory result of substantial compliance led to the Theory of Regulatory Compliance and the public policy suggestion that substantial and not full (100%) regulatory compliance is in the best interests of clients. Low regulatory compliance, although not part of the chart above, happens very rarely. Programs that do not meet basic health and safety rules are issued cease and desist orders and are put out of business.
High weights are rules that place clients at greatest risk and should never be out of compliance. These are the Risk Assessment Rules that are always reviewed when a licensing inspection is completed, either when a full or abbreviated/differential monitoring visit is conducted. A licensing inspector does not want to leave a facility without having checked these rules.

Medium weights are rules that are very important but do not place clients at greatest risk. They generally add to the well-being of the client but will not jeopardize their health or safety. Generally, but not always, we find these rules as part of a licensing key indicator abbreviated inspection in a differential monitoring visit. For whatever reason, facilities in high compliance generally have these in compliance and facilities in low compliance generally have these out of compliance or not in compliance. These are our predictor rules that statistically predict overall regulatory compliance.

Low weights are rules that do not have a real risk impact on the client. They are generally paper oriented rules, record keeping type rules. A lot of times they make it into the Key Indicator Rule list because it has to do with attention to detail and at times this will distinguish a high performing provider from one that is not doing as well. However, it can also have the opposite effect and these rules can "muddy the waters" when it comes to distinguishing between really high performing facilities and facilities that are just mediocre by contributing to data distributions that are highly skewed and difficult to find the "best of the best". Licensing researchers and policymakers need to pay attention to this dichotomy.

Risk assessment rules are those rules which have been identified as the most critical in providing the safeguards for clients when in out of home facilities. These rules are very heavily weighted and usually always in compliance. A violation of this approach is finding low compliance with specific risk assessment rules. These rules constitute approximately 10-20% of all rules.

Key indicator rules are those rules which statistically predict overall compliance with all rules. There is a small number of key indicator rules that are identified, generally less than 10% of all rules. These rules are in the mid-range when it comes to their weights or risk factor. And the rules are generally in high to substantial compliance. A violation of this approach is finding a facility in compliance with the key indicator rules but finding other rules out of compliance or the facility in the low group. (Please go to the following website for additional information http://RIKInstitute.com)

Substantial compliance is when the majority of the rules are in compliance with only a couple/few rules being out of compliance which are generally low weighted rules, such as paper driven rules. These rules are in the low-range when it comes to their weights or risk factor. Nice to have in place in being able to say we have "crossed every 't' and dotted every 'i'" but not critical in protecting the health, safety and well-being of the client. A violation of substantial compliance would be requiring full (100%) compliance with all rules.

This short RIKI Technical Research Note (#71) provides some additional guidance and interpretation of how particular patterns of licensing data impact and relate to each other. It is provided because of the nuances of regulatory compliance/licensing data which have limitations from an analytical perspective (Please see the RIKINotes blog on the RIKInstitute.com website).
Here is another way of looking at the chart presented on page 1 which incorporates all the elements elaborated in the chart: **Compliance, Weights, Approach, and Violation of the Approach (V).**

<table>
<thead>
<tr>
<th>Compliance (NC)</th>
<th>Weights</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-High NC</td>
<td>VRA</td>
</tr>
<tr>
<td>Medium NC</td>
<td>Key Indicators</td>
</tr>
<tr>
<td>Low NC</td>
<td>Risk Assessment</td>
</tr>
<tr>
<td></td>
<td>False Positive</td>
</tr>
</tbody>
</table>

VRA = Violation of Risk Assessment; VTRC = Violation of Theory of Regulatory Compliance.

______________________________
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Risk Assessment Matrices (RAM) are potential decision making tools developed as part of the weighting/risk assessment methodology for licensing and regulatory compliance. Most matrices have two major foci, risk/severity and prevalence/probability components. Each is rank ordered from low to medium to high risk/severity or prevalence/probability. To date there has not been much empirical data used to determine the various levels of low, medium and high that has been shared in the research literature. I am hoping to change this with this short paper.

The data drawn for this paper is taken from the National Licensing, Differential Monitoring, Key Indicator and Risk Assessment Data Base maintained at the Research Institute for Key Indicators (RIKIlc). This data base has been in existence for over 40 years and contains data from many states, provinces and national programs.

In order to determine the relative risk level of specific rules/regulations, generally a weighting system is used where a group of stakeholders in a specific state make assessments to the potential risk for clients if a specific rule is out of compliance. Usually the weighting scale is a Likert type scale going from low risk (1) to high risk (8). Medium risk usually is around a 4.

Prevalence/probability data are not as well determined in the literature and focuses more on the individual rule. However, for the purposes of this paper, I want to use prevalence/probability data drawn from regulatory compliance histories and move beyond individual rules so that the Risk Assessment Matrix (RAM) can be used more effectively for making monitoring decisions. Regulatory compliance histories will provide an overall picture of how well the program has complied with rules over time. The number of rules in Chart 1 are rules that are out of compliance in any monitoring review conducted. Based upon the National Licensing, Differential Monitoring, Key Indicator and Risk Assessment Data Base, these are the averages across jurisdictions and have become the standard thresholds for determining low, medium and high regulatory compliance.

<table>
<thead>
<tr>
<th>Probability/Prevalence</th>
<th>Levels</th>
<th>High</th>
<th>Medium</th>
<th>Low</th>
<th>Weights</th>
</tr>
</thead>
<tbody>
<tr>
<td>Risk/High</td>
<td>9</td>
<td>8</td>
<td>7</td>
<td>7-8</td>
<td></td>
</tr>
<tr>
<td>Severity Medium</td>
<td>6</td>
<td>5</td>
<td>4</td>
<td>4-6</td>
<td></td>
</tr>
<tr>
<td>Low</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>1-3</td>
<td></td>
</tr>
<tr>
<td># of Rules</td>
<td>8 or more</td>
<td>3-7</td>
<td>2 or fewer</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
The resulting numeric scale from 1-9 provides a rank ordering when Severity/Risk and Prevalence/Probability are cross-referenced. In this rank ordering 9 = High Risk/Severity (Weight = 7-8) and High Prevalence/Probability (8 rules or more are out of compliance) while a 1 = Low Risk/Severity (Weight = 1-3) and Low Prevalence/Probability (2 rules or fewer are out of compliance). A 5 = Medium Risk/Severity (Weight = 4-6) and Medium Prevalence/Probability (3-7 rules are out of compliance).

Utilizing the data from the above Chart 1, a Monitoring Decision Making Matrix (MD2M) can be constructed for the various Licensing Tiers which will assist in determining further targeted monitoring as depicted in Chart 2 below.

### Chart 2 – Monitoring Decision Making Matrix

<table>
<thead>
<tr>
<th>Tier 1</th>
<th>1,2</th>
<th>Potentially eligible for abbreviated reviews &amp; differential monitoring + Technical Assistance (TA) being available.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tier 2/3</td>
<td>3,4,5,6</td>
<td>Comprehensive review + required TA + potentially more frequent reviews.</td>
</tr>
<tr>
<td>Tier 4</td>
<td>7,8,9</td>
<td>Comprehensive review + required TA + Potential Sanctions that could lead to licensing revocation.</td>
</tr>
</tbody>
</table>

Chart 2 takes the data from Chart 1 and transposes the 1-9 Severity/Prevalence data (column 2) to a Tiered Decision Making Scale (Column 1) regarding targeted monitoring and technical assistance (column 3). This chart could be taken further and decisions regarding the status of the license could be made such as Tier 1 would result in a full license, Tier 2/3 would result in a provisional license, and Tier 4 would result in the removal of a license.

In the past, these decisions were generally driven by general guidance with a lack of data driving the decisions. By utilizing data from the National Licensing, Differential Monitoring, Key Indicator and Risk Assessment Data Base it is now possible to make these decisions more objective and data driven. Also, the focus of RAM’s in the past has been at the individual rule/regulation level for both risk/severity and prevalence/probability. This presentation moves this level of analysis to a broader focus which looks at the program in general by incorporating regulatory compliance histories in determining prevalence/probability data.
The Theory of Regulatory Compliance (TRC) deals with the importance and significance of complying with rules or regulations. This theory has implications for all rule, regulatory, and standards development throughout human service and economic domains although the research is being drawn from the human services field. The TRC has developed over the past 40 years. It has particular significance now as the need for either more or less oversight has become politically charged. What is important about the TRC is its emphasis on selecting the right rules rather than having more or less rules and the nature of these rules as being significantly predictive of positive outcomes by being in compliance with said rules.

The Theory of Regulatory Compliance was first proposed in the 1970's when the relationship between compliance with rules was compared to compliance with best practice standards and outcome data. From this comparison, it became clear that as facilities were in 100% compliance with all rules, there overall best practice scores and positive outcomes began to drop off. It was also found that there was a "sweet spot" at a substantial compliance level where best practice scores and positive outcomes were at their highest levels. In statistical terms, the relationship was curvilinear rather than linear. This initial result has been confirmed many times over the past 40 years in different forms of human service facilities. This result also led to the conclusion that possibly being in "full" or 100% compliance with all rules was not necessarily a good policy and that all rules or regulations are not created equal.

This led to the development of two methodologies dealing with risk assessment and key indicators of regulatory compliance. In both of these methodologies, the focus is on identifying a more targeted group of rules that either statistically predict overall regulatory compliance or reduce risk.

But what is the underlying reason for the TRC. It appears from data collected in various regulatory systems that the nature of the rules themselves may be the real problem. When rules are too minimal to comply with, it is far more difficult to discriminate between the really good facilities and the mediocre facilities. This unfortunately is the nature of regulatory data, it is dramatically skewed data with the majority of facilities being in compliance with all the rules.

The solution to the above dilemma is not to deregulate or to over-regulate but to come up with the "right" balance of rules or regulations. We do not want to make the mistake of the old proverbial "throwing out the baby with the bathwater". We need to have some form of oversight but it needs to be the right balance of oversight based upon risk and predictive targeting of specific rules or regulations. The statistical methodologies exist to identify these specific risk and predictive rules and regulations.

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1. For additional information regarding TRC, please go to the following website: [http://RIKInstitute.com/RIKI](http://RIKInstitute.com/RIKI).

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Balance of “do no harm” rules with “best practice” standards selected by risk and ability to predict positive outcomes. The Theory of Regulatory Compliance deals with selecting the “right” rules and standards that have predictive validity and do no harm. It acknowledges that all rules and standards are not created equal and have a differential impact in a monitoring or licensing system. By following a differential monitoring approach of key indicators and risk assessment, the most cost efficient and effective system can be implemented. The Theory of Regulatory Compliance proposes policy based upon substantial but not full compliance (100%) with all rules. The following algorithm summarizes TRC:

\[(PC < 100) + (PQ = 100) \Rightarrow KI (10-20\% \ PC) + RA (10-20\% \ PC) + KIQP (5-10\% \ of \ PQ) \Rightarrow OU\]
Theory of Regulatory Compliance Math Modeling (Fiene, 11/16)

This presentation will provide key definitions, a legend and math modeling concepts related to the Theory of Regulatory Compliance. It builds upon the previous two presentations on an overview and algorithm for the Theory of Regulatory Compliance (TRC).

**Legend/Definitions:**
- \( R \) = Rules/Regulations
- \( C \) = Compliance with rules/regulations
- \( NC \) = Non-Compliance with rules/regulations
- \( KI \) = Key Indicators of substantial (99%) compliance with all rules/regulations
- \( CI \) = Comprehensive Instrument measuring compliance with all rules/regulations
- \( RA \) = Risk Assessment measuring the relative risk of non-compliance with specific rules/regulations
- \( DM \) = Differential Monitoring using Key Indicators and/or Risk Assessment

**Math Modeling:**

\[ \Sigma R = C \]

Summation of all rules equals compliance score.

\[ KI > 0 = CI \]

If \( KI \) greater than zero, use comprehensive instrument for measuring compliance with all rules/regulations.

\[ RA (NC\%) = CI \]

If \( RA \) has a pre-determined % on non-compliance, use comprehensive instrument for measuring compliance with all rules/regulations.

\[ KI + RA = DM \]

Key indicators plus Risk Assessment equals a Differential Monitoring Approach.

\[ TRC = 99\% + \phi = 100\% \]

Theory of Regulatory Compliance equals substantial compliance but not full compliance.

\[ NC + C = CI \]

Non-Compliance plus Compliance with all rules/regulations equals the score on the comprehensive instrument.

\[(CI < 100) + (CIPQ = 100) \rightarrow KI (10\%-20\% CI) + RA (10\%-20\% CI) + KIQP (5\%-10\% of CIPQ) \rightarrow OU\]

Where \( CI < 100 \) is substantial compliance with all rules or the 99% rule, \( CIPQ = 100 \) maximizing doing well, \( KI (10\%-20\% CI) \) is key indicators are generally 10-20% of all rules as well as risk assessment \( RA (10\%-20\% CI) \), \( KIQP (5\%-10\% of CIPQ) \) is the percent of standards taken from program quality that become key indicators of quality, and finally \( OU \) are positive outcomes or results.
Theory of Regulatory Compliance Monitoring Paradigms

Richard Fiene

December 2016

This paper provides some key elements to the two dominating paradigms (Relative versus Absolute) for regulatory compliance monitoring based upon the Theory of Regulatory Compliance. See the table below for the key elements summarized for the Monitoring Paradigms followed by a more detailed description of each key element. These key elements are all inter-related and at times are not mutually exclusive.

Regulatory Compliance Monitoring Paradigms

Relative <-------------------------------------------------------------------------------------------------> Absolute

Substantial <--------------------------------------------------------------------------------------------> Monolithic
Differential Monitoring <---------------------------------> One size fits all monitoring
Not all standards are created equal <---------------------------------> All standards are created equal
Do things well <---------------------------------------------------------------------------------------> Do no harm
Strength based <------------------------------------------------------------------------------------> Deficit based
Formative <---------------------------------------------------------------------------------------------> Summative
Program Quality <------------------------------------------------------------------------> Program Compliance
100-0 scoring <----------------------------------------------------------------------------------> 100 or 0 scoring
QRIS <------------------------------------------------------------------------------------------------------> Licensing
Non Linear <---------------------------------------------------------------------------------------------------> Linear

Relative versus Absolute Regulatory Compliance Paradigm: this is an important key element in how standards/rules/regulations are viewed when it comes to compliance. For example, in an absolute approach to regulatory compliance either a standard/rule/regulation is in full compliance or not in full compliance. There is no middle ground. It is black or white, no shades of gray. It is 100% or zero. In defining and viewing these two paradigms, this dichotomy is the organizational key element for this paper.

Substantial versus Monolithic: in monolithic regulatory compliance monitoring systems, it is one size fits all, everyone gets the same type of review (this is addressed in the next key element below) and is more typical of an absolute paradigm orientation. In a substantial regulatory compliance monitoring system, programs are monitored on the basis of their past compliance history and this is more typical of a relative paradigm orientation. Those with high compliance have fewer and more abbreviated visits/reviews while those with low compliance have more comprehensive visits/reviews.
**Differential Monitoring versus One Size Fits All Monitoring**: in differential monitoring (Relative Paradigm), more targeted or focused visits are utilized spending more time and resources with those problem programs and less time and resources with those programs that are exceptional. In the One Size Fits All Monitoring (Absolute Paradigm), all programs get the same type/level of review/visit regardless of past performance.

**Not all standards are created equal versus All standards are created equal**: when looking at standards/rules/regulations it is clear that certain ones have more of an impact on outcomes than others. For example, not having a form signed versus having proper supervision of clients demonstrates this difference. It could be argued that supervision is much more important to the health and safety of clients than if a form isn’t signed by a loved one. In a relative paradigm, all standards are not created nor administered equally; while in an absolute paradigm of regulatory compliance, the standards are considered created equally and administered equally.

“**Do things well**” versus “**Do no harm**”: “doing things well” (Relative Paradigm) focuses on quality of services rather than “doing no harm” (Absolute Paradigm) which focuses on health and safety. Both are important in any regulatory compliance monitoring system but a balance between the two needs to be found. Erring on one side of the equation or the other is not in the best interest of client outcomes. “Doing no harm" focus is on the "least common denominator" – the design and implementation of a monitoring system from the perspective of focusing on only 5% of the non-optimal programs (“doing no harm”) rather than the 95% of the programs that are "doing things well".

**Strength based versus Deficit based**: in a strength based monitoring system, one looks at the glass as “half full" rather than as “half empty" (deficit based monitoring system). Emphasis is on what the programs are doing correctly rather than their non-compliance with standards. A strength based system is non-punitive and is not interested in catching programs not doing well. It is about exemplars, about excellent models where everyone is brought up to a new higher level of quality care.

**Formative versus Summative**: relative regulatory compliance monitoring systems are formative in nature where there is an emphasis on constant quality improvement and getting better. In absolute regulatory compliance monitoring systems, the emphasis is on being the gate-keeper and making sure that decisions can be made to either grant or deny a license to operate. It is about keeping non-optimal programs from operating.

**Program Quality versus Program Compliance**: relative regulatory compliance monitoring systems focus is on program quality and quality improvement while in absolute regulatory compliance monitoring systems the focus in on program compliance with rules/regulations with the emphasis on full, 100% compliance.

**100 – 0 scoring versus 100 or 0 scoring**: in a relative regulatory compliance monitoring system, a 100 through zero (0) scoring can be used where there are gradients in the scoring, such as partial compliance scores. In an absolute regulatory compliance monitoring system, a 100% or zero (0) scoring is used demonstrating that either the standard/rule/regulation is fully complied with or not complied with at all.

**QRIS versus Licensing**: examples of a relative regulatory compliance monitoring system would be QRIS – Quality Rating and Improvement Systems. Absolute regulatory compliance systems would be state licensing systems. Many programs talk about the punitive aspects of the
present human services licensing and monitoring system and its lack of focus on the program quality aspects in local programs. One should not be surprised by this because in any regulatory compliance system the focus is on "doing no harm" rather than "doing things well". It has been and continues to be the focus of licensing and regulations in the USA. The reason QRIS - Quality Rating and Improvement Systems developed in early care and education was to focus more on "doing things well" rather than "doing no harm".

**Non-Linear versus Linear**: the assumption in both relative and absolute regulatory compliance monitoring systems is that the data are linear in nature which means that as compliance with standards/rules/regulations increases, positive outcomes for clients increases as well. The problem is the empirical data does not support this conclusion. It appears from the data that the relationship is more non-linear where there is a plateau effect with regulatory compliance in which client outcomes increase until substantial compliance is reached but doesn’t continue to increase beyond this level. There appears to be a “sweet spot” or balancing of key standards/rules/regulations that predict client outcomes more effectively than 100% or full compliance with all standards/rules/regulations – this is the essence of the Theory of Regulatory Compliance – substantial compliance with all standards or full compliance with a select group of standards that predict overall substantial compliance and/or positive client outcomes.

As the regulatory administration field continues to think about the appropriate monitoring systems to be designed and implemented, the above structure should help in thinking through what these systems’ key elements should be. Both paradigms are important, in particular contexts, but a proper balance between the two is probably the best approach in designing regulatory compliance monitoring systems.

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*For additional information:*
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DOI: 10.13140/RG.2.2.23767.06564
EARLY CHILDHOOD PROGRAM QUALITY IMPROVEMENT/INDICATOR MODEL (ECPQI2M4©) & DIFFERENTIAL MONITORING LOGIC MODEL AND ALGORITHM (DMLMA©) Update (Fiene, 12/12/15)

Legend:
NRC = National Resource Center for Health and Safety in Child Care
AAP = American Academy of Pediatrics
APHA = American Public Health Association
OHS = Office of Head Start
ACF = Administration for Children and Families
OCC = Office of Child Care
ASPE = Assistant Secretary’s Office for Planning and Evaluation
13I = Thirteen Indicators of Quality Child Care, ASPE
HSKI-C = Head Start Key Indicators
Stepping Stones = Stepping Stones to Caring for Our Children, NRC, AAP, APHA
PD = Professional Development, Training, Technical Assistance, Mentoring
PQ = Quality Rating and Improvement Systems (QRIS), Quality Improvements
TCO/TRC = Theory of Regulatory Compliance/Outcomes

Comprehensive Reviews

Absolute Paradigm

- CFOC – Caring for Our Children
  - NRC, AAP, APHA, NARA (PC)
  - TCO/TRC=PCxPQ Morgan Model NQA
- Head Start Performance Standards
  - OHS, NHS
  - QRIS, INQUIRE (PD) (PQ)

Relative Paradigm

- Risk Assessment:
  - Stepping Stones
    - NRC, AAP, APHA (RA)
- Key Indicators:
  - HSKI-C & 13I of Quality
    - OHS, ASPE (KI)

Abbreviated Reviews

- Caring for Our Children Basics: CFOCB (PC)
  - ACF, OCC
  - Mentoring (PD)
  - Family Engagement (PQ)
National Differential Monitoring Conceptual Framework (Fiene, 2016)

Dashboard of Risk/Key Indicators
Process, Output, Outcome, Critical Success Indicators

ACF, OCC, OHS
CFOCB, HSPS, PIR, National Data Base CCDF Plans

50 States Rules and Regulations and QRIS Standards

HHS Regional Offices and Training and TA Centers

Child Care Local Programs

Child Care – Early Head Start

Local Head Start Programs

Parents and Children
National Differential Monitoring Conceptual Framework Brief Explanation:

The key elements for this conceptual framework is the emphasis on data utilization via key indicators and risk assessment which results in targeted/differential monitoring of programs via a state, regional, and national data base. Data would be collected at the local level in programs (child care (centers, homes, group homes); Head Start programs; child care/early Head Start programs, etc.) and would be monitored at the state and regional levels. The data via monitoring reports, CCDF plans, etc. would move from the state and regional levels to the national level at ACF to form a national data base. From the national data base, a series of key indicator, risk assessment, process, output, outcome and critical success indicators would be culled (dashboard) from the full comprehensive data base to determine the levels of future reviews and monitoring of states and programs.

These indicators would be fed back to the regional offices and states with states being able to do the same with their respective licensing systems in reviews of local programs. The data from the comprehensive data base would also be fed back to the states, regional offices and the training & technical assistance offices to focus specific training and technical assistance based upon the results of the monitoring reviews. Within this conceptual framework, it is proposed to use a professional development passport within state professional development systems/registries which has badges attached for ongoing training & technical assistance for individual ECE staff. This professional development passport could provide the basis of a document (it would contain all the training received by the individual via a stamp/badge articulation documentation process) that would be transferable from state to state similar to how a regular passport is used as identification in moving from country to country. This could potentially become a national credentialing/licensing system for ECE staff.

This conceptual framework would take into account the collecting and analyzing of data and its subsequent utilization for training & technical assistance. All the components/key elements for such a system have been set up by ACF, now what we need to do is put all the pieces together into a unified monitoring system.
Theory of Regulatory Compliance Algorithm (2/17)

1) \( \Sigma R = C \)
2) Review C history x 3 yrs
3) NC + C = CI
4) If CI = 100 -> KI
5) If KI > 0 -> CI or if C < 100 -> CI
6) If RA (NC\% > 0) -> CI
7) KI + RA = DM
9) RA = \(\Sigma R_1 + \Sigma R_2 + \Sigma R_3 + \ldots \Sigma R_n / N\)
10) (TRC = 99\%) + (\(\phi = 100\%\))
11) (CI < 100) + (CIPQ = 100) -> KI (10\% CI) + RA (10-20\% CI) + KIQP (5-10\% of CIPQ) -> OU

Legend:
R = Rules/Regulations/Standards
C = Compliance with Rules/Regulations/Standards
NC = Non-Compliance with Rules/Regulations/Standards
CI = Comprehensive Instrument for determining Compliance
\(\phi\) = Null
KI = Key Indicators
KI >= .26+ Include
KI <= .25 Null, do not include
RA = Risk Assessment
\(\Sigma R_1\) = Specific Rule on Likert Risk Assessment Scale (1-8; 1 = low risk, 8 = high risk)
N = Number of Stakeholders
DM = Differential Monitoring
TRC = Theory of Regulatory Compliance
CIPQ = Comprehensive Instrument Program Quality
KIQP = Key Indicators Program Quality
OU = Outcomes
A = High Group + Programs in Compliance on Specific Compliance Measure (R1...Rn).
B = High Group + Programs out of Compliance on Specific Compliance Measure (R1...Rn).
E = Low Group + Programs in Compliance on Specific Compliance Measure (R1...Rn).
D = Low Group + Programs out of Compliance on Specific Compliance Measure (R1...Rn).
W = Total Number of Programs in Compliance on Specific Compliance Measure (R1...Rn).
X = Total Number of Programs out of Compliance on Specific Compliance Measure (R1...Rn).
Y = Total Number of Programs in High Group (\(\Sigma R = 98+\)).
Z = Total Number of Programs in Low Group (\(\Sigma R <= 97\)).
High Group = Top 25\% of Programs in Compliance with all Compliance Measures (\(\Sigma R\)).
Low Group = Bottom 25\% of Programs in Compliance with all Compliance Measures (\(\Sigma R\)).
Regulatory Compliance Matrices

### 2 x 2 Matrix (In vs Out of compliance x High vs Low Groups):

<table>
<thead>
<tr>
<th></th>
<th>A</th>
<th>B</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>D</td>
<td></td>
</tr>
</tbody>
</table>

(A = In compliance + High Group)(B = In compliance + Low Group)(C = Out of Compliance + High Group)(D = Out of Compliance + Low Group); B = false positives; C = false negatives; A + D > B + C; B > C; \( A + D = + \text{ results}. \)

### 2 x 3 Matrix (In vs Out of compliance x 100% vs Substantial vs Low Compliance Groups):

<table>
<thead>
<tr>
<th></th>
<th>A</th>
<th>B</th>
<th>C</th>
</tr>
</thead>
<tbody>
<tr>
<td>D</td>
<td>E</td>
<td>F</td>
<td></td>
</tr>
</tbody>
</table>

(A = In compliance + 100% Group)(B = In compliance + Substantial Compliance Group)(C = In compliance + Low Group)(D = Out of compliance + 100% Group)(E = Out of compliance + Substantial Compliance Group)(F = Out of compliance + Low Group); C = false positives; D, E = false negatives; B > A > C; B + F = + results.

### 3 x 2 Matrix (In vs Partial vs Out of compliance x High vs Low Groups):

<table>
<thead>
<tr>
<th></th>
<th>A</th>
<th>B</th>
<th>C</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>D</td>
<td>E</td>
<td>F</td>
</tr>
</tbody>
</table>

(A = In compliance + High Group)(B = In compliance + Low Group)(C = Partial compliance + High Group)(D = Partial compliance + Low Group)(E = Out of compliance + High Group)(F = Out of compliance + Low Group); B = false positives; E = false negatives; A > C > B > D; A + F = + results.

### 3 x 3 Matrix (In vs Partial vs Out of compliance x 100% vs Substantial vs Low Compliance Groups):

<table>
<thead>
<tr>
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<th>C</th>
</tr>
</thead>
<tbody>
<tr>
<td>D</td>
<td>E</td>
<td>F</td>
<td>G</td>
</tr>
<tr>
<td>H</td>
<td>I</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(A = In compliance + 100% Group)(B = In compliance + Substantial Compliance Group)(C = In compliance + Low Group)(D = Partial compliance + 100% Group)(E = Partial compliance + Substantial Compliance Group)(F = Partial compliance + Low Group)(G = Out of compliance + 100% Group)(H = Out of compliance + Substantial Compliance Group)(I = Out of compliance + Low Group); C = false positives; G, H = false negatives; B > A > D > E > C > F; B + D + I = + results.
Outline:

- 2x2 absolute vs 3x3+ relative matrices.
- 2x2 In or Out x 100% or 0%.
- 3x3 100%, Substantial, Low x In, Partial, Out.
- TRC proposes 3x2 = 100%, Substantial, Low x In, Out.
- KI 2x2 or 3x2; RA 3x3 matrices.
- Normally distributed curve 3x3+ vs Skewed data 2x2 - visualize a normally distributed curve over the cells vs a very skewed curve over the 2 cells.
- ERS as 7x7 potential matrix.
- Use these matrices to explain RCMP and potential data analyses.
- Better analytical techniques for analyzing these matrices.
- Problem with 2x2 are the false negatives.
- Does a 3x3+ reduce the false negatives. Key question.
- What I have found over my 40+years is that I have as many questions as I have answers at this point, not sure that 2x2 or 3x2 are best matrices. What happens if we expand to a 7x7 matrix.
- Phi to Chi-square as the preferred statistic?
- Would Matrix Algebra be more appropriate.
- First time tying KI and RA together via 2x2 and 3x3 matrices. Common analytical framework.

Research Questions:

What are the differences between a 2x2 vs 2x3 vs 3x3 matrices? This will account for absolute, relative and substantial compliance ranges.

What is the impact of having 2x2, 2x3, and 3x3 on false negatives?

What are the results with 100% vs 99-98% and low compliance groups?

What are the differences between samples and full data sets?

Relationship between PC and PQ? Linear or non-linear
Matrices:

<table>
<thead>
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<th>B</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>D</td>
<td></td>
</tr>
</tbody>
</table>

2 x 2 = I/O x H/L  (I = In compliance)(O = Out of compliance)(H = High Group)(L = Low Group)

**A + D = positive+ results, to be expected**

B = false positives

**C = false negatives**

A + D > B + C

B > C

Class ARC Matrix

<table>
<thead>
<tr>
<th></th>
<th>A</th>
<th>B</th>
<th>C</th>
</tr>
</thead>
<tbody>
<tr>
<td>D</td>
<td>E</td>
<td>F</td>
<td></td>
</tr>
</tbody>
</table>

3 x 2 = H/S/L x I/O (S = Substantial Compliance) or 3 x 3 with I/P/O where P = Partial.

A = 100% compliance

B = Substantial compliance

C = Low compliance

C = false positives

**D = false negatives**

B > A > C

**B + F = + results, to be expected**

Fiene TRC Matrix

<table>
<thead>
<tr>
<th></th>
<th>A</th>
<th>B</th>
<th>C</th>
</tr>
</thead>
<tbody>
<tr>
<td>D</td>
<td>E</td>
<td>F</td>
<td></td>
</tr>
</tbody>
</table>

G  H  I

3 X 3+ = H/M/L x H/M/L

A = Low probability + low risk

E = Medium probability + medium risk

I = High probability + high risk

**A > B > C > D > E > F > G > H > I**

Fiene RA Matrix
## Classification Matrix & Sensitivity Analysis for Validating Licensing Key indicator Systems

Technical Research Note (Fiene, 2017)

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>5</th>
<th>7</th>
<th>8</th>
<th>10</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>A</strong></td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>0.00</td>
<td>0.00</td>
<td>1.00</td>
<td>1.00</td>
<td>Perfect</td>
</tr>
<tr>
<td><strong>B</strong></td>
<td>0.52</td>
<td>0.52</td>
<td>0.52</td>
<td>0.48</td>
<td>0.48</td>
<td>0.52</td>
<td>0.04</td>
<td>Random</td>
</tr>
<tr>
<td><strong>C</strong></td>
<td>0.71</td>
<td>0.96</td>
<td>0.94</td>
<td>0.04</td>
<td>0.29</td>
<td>0.84</td>
<td>0.70</td>
<td>False (-)</td>
</tr>
<tr>
<td><strong>D</strong></td>
<td>0.94</td>
<td>0.78</td>
<td>0.71</td>
<td>0.22</td>
<td>0.06</td>
<td>0.81</td>
<td>0.70</td>
<td>False (+)</td>
</tr>
<tr>
<td><strong>E</strong></td>
<td>-----</td>
<td>0.00</td>
<td>0.00</td>
<td>1.00</td>
<td>-----</td>
<td>0.00</td>
<td>-----</td>
<td>False +100%</td>
</tr>
<tr>
<td><strong>F</strong></td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>1.00</td>
<td>1.00</td>
<td>0.00</td>
<td>-1.00</td>
<td>False+-100</td>
</tr>
<tr>
<td><strong>H</strong></td>
<td>0.45</td>
<td>0.46</td>
<td>0.40</td>
<td>0.54</td>
<td>0.55</td>
<td>0.46</td>
<td>-0.08</td>
<td>Random</td>
</tr>
</tbody>
</table>

### Measures:

1 = Sensitivity  
2 = Specificity  
3 = Precision  
5 = False Positive  
7 = False Negative  
8 = Accuracy  
10 = Correlation

\[ \text{PP} = \frac{TP}{TP + FP} \]  
\[ \text{PN} = \frac{TN}{FP + TN} \]  
\[ \text{TP} = \text{True Positive} = KI+ \]  
\[ \text{TN} = \text{True Negative} = KI- \]

### Truth Table:

<table>
<thead>
<tr>
<th>PREDICTED POSITIVE (PP)(CI+)</th>
<th>TRUE POSITIVE (TP)(KI+)</th>
<th>TRUE NEGATIVE (TN)(KI-)</th>
</tr>
</thead>
<tbody>
<tr>
<td>++</td>
<td></td>
<td></td>
</tr>
<tr>
<td>+</td>
<td></td>
<td>+</td>
</tr>
<tr>
<td>-</td>
<td>+</td>
<td>-</td>
</tr>
<tr>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

### CI+/CI- /KI+/KI-:

- **A** = 25/0/0/25 - Perfect match between CI and KI.
- **B** = 13/12/12/13 - Random matching between CI and KI.
- **C** = 17/7/1/25 - KI+ x CI- (False-)  
- **D** = 17/1/7/25 - KI- x CI+ (False+)
- **E** = 0/0/50/0 - KI- x CI+ unlikely
- **F** = 0/25/25/0 - False + & - 100% unlikely
- **H** = 20/24/30/26 - Random matching between CI and KI.
Technical Detail Notes: Validation Updates to the Fiene Key Indicator Systems

January 2015

These notes will provide guidance on validating existing Key Indicator Licensing Systems. These notes are based upon the last three years of research and data analysis in determining the best means for conducting these validation studies.

These notes are based upon existing Key Indicator Systems in which data can be drawn from an already present data base which contains the comprehensive instrument (total compliance data) and the key indicator instrument (key indicator rule data). When this is in place and it can be determined how licensing decisions are made: full compliance with all rules or substantial compliance with all rules to receive a license, then the following matrix can be used to begin the analyses (see Figure 1):

<table>
<thead>
<tr>
<th>Figure 1</th>
<th>Providers who fail the Key Indicator review</th>
<th>Providers who pass the Key Indicator review</th>
<th>Row Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Providers who fail the Comprehensive review</td>
<td>W</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Providers who pass the Comprehensive Review</td>
<td>Y</td>
<td>Z</td>
<td></td>
</tr>
<tr>
<td>Column Totals</td>
<td></td>
<td></td>
<td>Grand Total</td>
</tr>
</tbody>
</table>
A couple of annotations regarding Figure 1.

\( W + Z \) = the number of agreements in which the provider passed the Key Indicator review and also passed the Comprehensive review.

\( X \) = the number of providers who passed the Key Indicator review but failed the Comprehensive review. This is something that should not happen, but there is always the possibility this could occur because the Key Indicator Methodology is based on statistical methods and probabilities. We will call these False Negatives (FN).

\( Y \) = the number of providers who failed the Key Indicator review but passed the Comprehensive review. Again, this can happen but is not as much of a concern as with “\( X \)”. We will call these False Positives (FP).

Figure 2 provides an example with actual data from a national organization that utilizes a Key Indicator System. It is taken from 50 of its program providers.

<table>
<thead>
<tr>
<th>Figure 2</th>
<th>Providers who fail the Key Indicator review</th>
<th>Providers who pass the Key Indicator review</th>
<th>Row Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Providers who fail the Comprehensive review</td>
<td>25</td>
<td>1</td>
<td>26</td>
</tr>
<tr>
<td>Providers who pass the Comprehensive Review</td>
<td>7</td>
<td>17</td>
<td>24</td>
</tr>
<tr>
<td>Column Total</td>
<td>32</td>
<td>18</td>
<td>50</td>
</tr>
</tbody>
</table>

To determine the agreement ratio, we use the following formula:

\[
\frac{A}{A + D}
\]

Where \( A \) = Agreements and \( D \) = Disagreements.
Based upon Figure 2, $A + D = 42$ which is the number of agreements; while the number of disagreements is represented by $B = 1$ and $C = 7$ for a total of 8 disagreements. Putting the numbers into the above formula:

$$\frac{42}{42 + 8}$$

Or

$$0.84 = \text{Agreement Ratio}$$

The False Positives (FP) ratio is .14 and the False Negatives (FN) ratio is .02. Once we have all the ratios we can use the ranges in Figure 3 to determine if we can validate the Key Indicator System. The FP ratio is not used in Figure 3 but is part of the Agreement Ratio.

**Figure 3 – Thresholds for Validating the Fiene Key Indicators for Licensing Rules**

<table>
<thead>
<tr>
<th>Agreement Ratio Range</th>
<th>False Negative Range</th>
<th>Decision</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1.00) – (.90)</td>
<td>.05+</td>
<td>Validated</td>
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<tr>
<td>(.89) – (.85)</td>
<td>.10 -.06</td>
<td>Borderline</td>
</tr>
<tr>
<td>(.84) – (.00)</td>
<td>.11 or more</td>
<td>Not Validated</td>
</tr>
</tbody>
</table>
RESOURCES AND NOTES

For those readers who are interested in finding out more about the Key Indicator Methodology and the more recent technical updates as applied in this paper in actual state examples, please see the following publication:

Fiene (2014). *ECPQIM4®: Early Childhood Program Quality Indicator Model4*, Middletown: PA; Research Institute for Key Indicators LLC (RIKI). (http://drfiene.wordpress.com/riki-reports-dmlma-ecpqim4/)

In this book of readings/presentations are examples and information about differential monitoring, risk assessment, key indicators, validation, measurement, statistical dichotomization of data, and regulatory paradigms. This publication delineates the research projects, studies, presentations, & reports completed during 2013-14 in which these updates are drawn from.

For those readers interested in a historical perspective to the development of the Key Indicator methodology and licensing measurement, please see the following publications (most of these publications are available at the following website (http://rikinstitute.wikispaces.com/home):

*For additional information regarding this paper please contact:*
Dr Richard Fiene
Research Institute for Key Indicators LLC (RIKI)
41 Grandview Avenue
Middletown, PA. 17057
717-944-5868
http://DrFiene.wordpress.com/home
KEY INDICATOR TECHNICAL NOTES (12-8-15) RJF (this note updates a previous technical note from earlier in 2015 regarding this same topic):

Each state/jurisdiction will be different when applying the Key Indicator Methodology but there are some guiding principles that should be used:

1) Sample size should be around 100-200 programs. Less than 100 may not produce significant results and indicators will be missed. Over 200 programs will provide too many indicators reaching significance.

2) Set the p value to .01 (p < .01). P < .05 is too lenient and p < .001 is too stringent. P < .01 gives a proper balance for the number of indicators a state/jurisdiction will need.

3) The best model to use is the 100% for the high group (100-99% can also be used) with the middle programs not being used and the bottom 25% being used for the low group. The worse model to use is 100% as the high group and 99% or less as the low group. Too much error variance in the programs is introduced with an increase in making false negatives and the phi and Pearson correlations drop off significantly.

4) Select a moderate number of key indicators, don't select too few. It is more reliable to go with a few additional indicators than using too few.

5) Minimize false negatives by using the model described in #3 above.
Validation of the Key Indicator Methodology: Two Examples

Richard Fiene, Ph.D.

June 2015

Introduction

The purpose of this paper is to address the validation of the key indicator methodology as suggested in the *ASPE White Paper on ECE Monitoring* (2015). It was so accurately pointed out in this *White Paper* regarding the need to continue to access and validate differential monitoring which generally consists of the key indicator and risk assessment methods.

Over the past 35 years various aspects of differential monitoring have been assessed and validated. For example, studies by Kontos and Fiene (1987) and Fiene (2000) demonstrated the relationship between key indicators and child development outcomes. In 2002, another *ASPE White Paper on the Thirteen Indicators of Quality Child Care: A Research Update* summarized the research over the previous 20 years in demonstrating a core set of key indicator risk assessment standards. More recently, a study completed in Georgia (Fiene, 2014) validated the use of core rules in a risk assessment and differential monitoring approach. And in 2012, a study was done in California which demonstrated the time savings in using a key indicator approach. And finally, in 2013-14, a study was done in the national Head Start program in which their key indicator approach (Head Start Key Indicators (HSKI)) validated the decision making ability of key indicators in which an 84% - 91% agreement was found between the HSKI and Full Compliance Reviews. The focus of this paper will be on the latest findings from Head Start since these findings have not been published to date.

The National Child Care Licensing Study (2011) and the National Center for Child Care Quality Improvement (2014) have reported the significant use of differential monitoring, key indicators and risk assessment methods by many states throughout the country. And with the reauthorization of CCDBG (2014) and the increased emphasis on ECE program monitoring there is an increased need to validate these approaches. This paper is the beginning attempt to begin this process focusing on the key indicator method.
**Methodology**

This validation method is based upon existing Key Indicator Systems in which data can be drawn from an already present data base which contains the comprehensive instrument (total compliance data) and the key indicator instrument (key indicator rule data). When this is in place and it can be determined how licensing decisions are made: full compliance with all rules or substantial compliance with all rules to receive a license, then the following matrix can be used to begin the analyses (see Figure 1):

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\[ Y = \text{the number of providers who failed the Key Indicator review but passed the Comprehensive review. Again, this can happen but is not as much of a concern as with “} X \text{”}. We will call these False Positives (FP). \]
Figure 2 provides an example with actual data from a national organization that utilizes a Key Indicator System. It is taken from 50 of its program providers.

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<td>17</td>
<td>24</td>
</tr>
<tr>
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<td>50</td>
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\]

Where \( A = \text{Agreements} \) and \( D = \text{Disagreements} \).

Based upon Figure 2, \( A + D = 42 \) which is the number of agreements; while the number of disagreements is represented by \( B = 1 \) and \( C = 7 \) for a total of 8 disagreements. Putting the numbers into the above formula:

\[
\frac{42}{42 + 8} = .84
\]

The False Positives (FP) ratio is .14 and the False Negatives (FN) ratio is .02. Once we have all the ratios we can use the ranges in Figure 3 to determine if we can validate the Key Indicator System. The FP ratio is not used in Figure 3 but is part of the Agreement Ratio.

**Figure 3 – Thresholds for Validating the Fiene Key Indicators for Licensing Rules**

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</tr>
</thead>
<tbody>
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<td>.05+</td>
<td>Validated</td>
</tr>
<tr>
<td>(.89) – (.85)</td>
<td>.10 - .06</td>
<td>Borderline</td>
</tr>
<tr>
<td>(.84) – (.00)</td>
<td>.11 or more</td>
<td>Not Validated</td>
</tr>
</tbody>
</table>
Results

The following results are from a study completed in 2014 using Head Start data where HSKI reviews were compared with comprehensive reviews to make certain that additional non-compliance was not found when HSKI tools were administered to programs.

There was an 84% - 91% (see Table 1) agreement between the HSKI and Comprehensive Reviews which would indicate that the HSKI method was validated in Head Start based upon Figure 3 above in the Methodology section.

FY 2015 HSKI Agreement Table 1

<table>
<thead>
<tr>
<th></th>
<th>% agreement</th>
<th>Sensitivity</th>
</tr>
</thead>
<tbody>
<tr>
<td>FIS</td>
<td>91%</td>
<td>63%</td>
</tr>
<tr>
<td>GOV/SYS</td>
<td>84%</td>
<td>63%</td>
</tr>
<tr>
<td>SR</td>
<td>87%</td>
<td>52%</td>
</tr>
</tbody>
</table>

Fiscal (5)
- FIS1.1 - Effective financial management systems (D, I, T)
- FIS2.1 - Timely and complete financial records (D)
- FIS4.1 - Signed and approved time records (T)
- FIS5.3 - NFS contributions are necessary and reasonable (D)
- FIS6.2 - Complete and accurate equipment records (D, T)

SR (9)
- CDE1.2 - System to track, use, and report on SR goals (I)
- CDE2.1 - Evidenced-based curriculum (I)
- CDE3.1 - Individualizing (I)
- CDE3.4 - Child access to mental health services (I)
- CDE4.1 - Teacher qualifications (S)
- CHS1.5 - Health services tracking system (I)
- CHS2.2 - Referrals for children with disabilities to LEA or Part C Agency
- FCE2.3 - Access to mental health services (I)
- FCE5.3 - Coordination with LEAs and Part C Agencies

GOV/SYS (9)
- GOV2.1 - Training and Technical Assistance for GB and PC (I)
- GOV2.2 - GB responsibilities regarding program administration and operations (I)
- GOV3.1 - Reporting to GB and PC (I)
- GOV2.4 - PC submits program activity decisions to GB (I)
- SYS1.2 - Annual Self-Assessment (I)
Discussion

This paper presents a validation methodology to validate the differential monitoring approach that utilizes key indicators. This is an area that needs additional research as many more states began to think about employing the various approaches for differential monitoring involving risk assessment and key indicators.

The results from this paper are very encouraging in that they clearly demonstrate that a very large delivery system, the national Head Start program, can utilize key indicators (HSKI – Head Start Key Indicators) for a differential monitoring approach (Aligned Monitoring System).

For additional information regarding this paper:

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Research Institute for Key Indicators (RIKI)
http://RIKInstitute.wikispaces/com
RIKI.Institute@gmail.com
Appendix

A more recent validation study has been completed in the Province of Ontario, Canada where they compared three sets of Key Indicators over three calendar years in a similar fashion to the Head Start study reported above. Below are the results of these analyses.

<table>
<thead>
<tr>
<th>Year</th>
<th>Key Indicators</th>
<th>Agreement Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>2014</td>
<td>29 Indicators</td>
<td>0.90</td>
</tr>
<tr>
<td></td>
<td>35 Indicators</td>
<td>0.92</td>
</tr>
<tr>
<td></td>
<td>41 Indicators</td>
<td>0.94</td>
</tr>
<tr>
<td>2013</td>
<td>29 Indicators</td>
<td>0.90</td>
</tr>
<tr>
<td></td>
<td>35 Indicators</td>
<td>0.92</td>
</tr>
<tr>
<td></td>
<td>41 Indicators</td>
<td>0.93</td>
</tr>
<tr>
<td>2012</td>
<td>29 Indicators</td>
<td>0.91</td>
</tr>
<tr>
<td></td>
<td>35 Indicators</td>
<td>0.93</td>
</tr>
<tr>
<td></td>
<td>41 Indicators</td>
<td>0.94</td>
</tr>
</tbody>
</table>

Note. The key indicators are validated when the agreement ratio is 0.90 or above.
Technical Detail Updates to the Fiene Key Indicator Methodology

January 2015

The Key Indicator Methodology has recently been highlighted in a very significant Federal Office of Child Care publication series on Contemporary Licensing Highlights. In that Brief the Key Indicator Methodology is described as part of a differential monitoring approach along with the risk assessment methodology. Because of the potential increased interest in the Key Indicator Methodology, a brief update regarding the technical details of the methodology is warranted. For those readers who are interested in the historical development of Key Indicators I would suggest they download the resources available at the end of the paper.

This brief paper provides the technical and statistical updates for the key indicator methodology based upon the latest research in the field related to licensing and quality rating & improvement systems (QRIS). The examples will be drawn from the licensing research but all the reader needs to do is substitute “rule” for “standard” and the methodology holds for QRIS.

Before proceeding with the technical updates, let me review the purpose and conceptual underpinning of the Key Indicator Methodology. Key Indicators generated from the methodology are not the rules that have the highest levels of non-compliance nor are they the rules that place children most at risk of mortality or morbidity. Key Indicators are generally somewhere in the middle of the pack when it comes to non-compliance and risk assessment. The other important conceptual difference between Key Indicators and risk assessment is that only Key Indicators statistically predict or are predictor rules of overall compliance with all the rules for a particular service type. Risk assessment rules do not predict anything other than a group of experts has rated these rules as high risk for children’s mortality/morbidity if not complied with.

Something that both Key Indicators and risk assessment have in common is through their use one will save time in their monitoring reviews because you will be looking at substantially fewer rules. But it is only with Key Indicators that you can statistically predict additional compliance or non-compliance; this is not the case with risk assessment in which one is only looking at those rules which are a state’s high risk rules. And this is where differential monitoring comes into play by determining which programs are entitled to either Key Indicators and/or risk assessment for more abbreviated monitoring reviews rather than full licensing reviews (the interested reader
should see the *Contemporary Licensing Series on Differential Monitoring, Risk Assessment and Key Indicators* published by the Office of Child Care.

**Technical and Statistical Framework**

One of the first steps in the Key Indicator Methodology is to sort the licensing data into high and low groups, generally the highest and lowest licensing compliance with all the rules can be used for this sorting. Frequency data will be obtained on those programs in the top level (usually top 20-25%) and the bottom level (usually the bottom 20-25%). The middle levels are not used for the purposes of these analyses. These two groups (top level & the bottom level) are then compared to how each program scored on each child care rule (see Figure 1). In some cases, especially where there is very high compliance with the rules and the data are extremely skewed, it may be necessary to use all those programs that are in full (100%) compliance with all the rules as the high group. The next step is to look at each rule and determine if it is in compliance or out of compliance with the rule. This result is cross-referenced with the High Group and the Low Group as depicted in Figure 1.

<table>
<thead>
<tr>
<th>Figure 1</th>
<th>Providers In Compliance on Rule</th>
<th>Programs Out Of Compliance on Rule</th>
<th>Row Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Highest level</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(top 20-25%)</td>
<td>A</td>
<td>B</td>
<td>Y</td>
</tr>
<tr>
<td><strong>Lowest level</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(bottom 20-25%)</td>
<td>C</td>
<td>D</td>
<td>Z</td>
</tr>
<tr>
<td><strong>Column Total</strong></td>
<td>W</td>
<td>X</td>
<td>Grand Total</td>
</tr>
</tbody>
</table>

Once the data are sorted in the above matrix, the following formula (Figure 2) is used to determine if the rule is a key indicator or not by calculating its respective Key Indicator coefficient. Please refer back to Figure 1 for the actual placement within the cells. The legend (Figure 3) below the formula shows how the cells are defined.
Figure 2 – Formula for Fiene Key Indicator Coefficient

\[ \phi = \frac{(A)(D)-(B)(C)}{\sqrt{(W)(X)(Y)(Z)}} \]

Figure 3 – Legend for the Cells within the Fiene Key Indicator Coefficient

- **A** = High Group + Programs in Compliance on Specific Rule.
- **B** = High Group + Programs out of Compliance on Specific Rule.
- **C** = Low Group + Programs in Compliance on Specific Rule.
- **D** = Low Group + Programs out of Compliance on Specific Rule.
- **W** = Total Number of Programs in Compliance on Specific Rule.
- **X** = Total Number of Programs out of Compliance on Specific Rule.
- **Y** = Total Number of Programs in High Group.
- **Z** = Total Number of Programs in Low Group.

Once the data are run through the formula in Figure 2, the following chart (Figure 4) can be used to make the final determination of including or not including the rule as a key indicator. Based upon the chart in Figure 4, it is best to have a Key Indicator Coefficient approaching +1.00 however that is rarely attained with licensing data but has occurred in more normally distributed data.

Continuing with the chart in Figure 4, if the Key Indicator Coefficient is between +.25 and -.25, this indicates that the indicator rule is unpredictable in being able to predict overall compliance with the full set of rules. Either a false positive in which the indicator appears too often in the low group as being in compliance, or a false negative in which the indicator appears too often in the high group as being out of compliance. This can occur with Key Indicator Coefficients above +.25 but it becomes unlikely as we approach +1.00 although there is always the possibility that other rules could be found out of compliance. Another solution is to increase the number of key indicator rules to be reviewed but this will cut down on the efficiency which is desirable and the purpose of the key indicators.

The last possible outcome with the Key Indicator Coefficient is if it is between -.26 and -1.00, this indicates that the indicator is a terrible predictor because it is doing just the opposite of the decision we want to make. The indicator rule would predominantly be in compliance with the low group rather than the high group so it would be statistically predicting overall non-compliance. This is obviously something we do not want to occur.

Figure 5 gives the results and decisions for a QRIS system. The thresholds in a QRIS system are increased dramatically because QRIS standard data are less skewed than licensing data and a
more stringent criterion needs to be applied in order to include particular standards as Key Indicators.

**Figure 4 – Thresholds for the Fiene Key Indicators for Licensing Rules**

<table>
<thead>
<tr>
<th>Key Indicator Range</th>
<th>Characteristic of Indicator</th>
<th>Decision</th>
</tr>
</thead>
<tbody>
<tr>
<td>(+1.00) – (+.26)</td>
<td>Good Predictor</td>
<td>Include</td>
</tr>
<tr>
<td>(+.25) – (.25)</td>
<td>Unpredictable</td>
<td>Do not Include</td>
</tr>
<tr>
<td>(-.26) – (-1.00)</td>
<td>Terrible Predictor</td>
<td>Do not Include</td>
</tr>
</tbody>
</table>

**Figure 5 – Thresholds for the Fiene Key Indicators for QRIS Standards**

<table>
<thead>
<tr>
<th>Key Indicator Range</th>
<th>Characteristic of Indicator</th>
<th>Decision</th>
</tr>
</thead>
<tbody>
<tr>
<td>(+1.00) – (+.76)</td>
<td>Good Predictor</td>
<td>Include</td>
</tr>
<tr>
<td>(+.75) – (.25)</td>
<td>Unpredictable</td>
<td>Do not Include</td>
</tr>
<tr>
<td>(-.26) – (-1.00)</td>
<td>Terrible Predictor</td>
<td>Do not Include</td>
</tr>
</tbody>
</table>

**RESOURCES AND NOTES**

For those readers who are interested in finding out more about the Key Indicator Methodology and the more recent technical updates as applied in this paper in actual state examples, please see the following publication:
Fiene (2014). *ECPQIM4©: Early Childhood Program Quality Indicator Model4*, Middletown: PA; Research Institute for Key Indicators LLC (RIKI).  
(http://drfiene.wordpress.com/riki-reports-dmlma-ecpqim4/)

In this book of readings/presentations are examples and information about differential monitoring, risk assessment, key indicators, validation, measurement, statistical dichotomization of data, and regulatory paradigms. This publication delineates the research projects, studies, presentations, & reports completed during 2013-14 in which these updates are drawn from.
For those readers interested in a historical perspective to the development of the Key Indicator methodology and licensing measurement, please see the following publications (most of these publications are available at the following website (http://rikinstitute.wikispaces.com/home):


Key Indicator Methodology Technical Note(2): The Dichotomization and Bi-Polarization of the Matrix Data Base

Richard Fiene, Ph.D.

June 2015

This latest technical note updates the thresholds for the high and low groups within the key indicator matrix. This technical note is based upon the latest studies during the early 2015 time frame in which very large data distributions were available to test certain criteria with the key indicator methodology. Because of the extreme skewness present in licensing/regulatory data, certain statistical adjustments need to be made so that the analyses performed reflect the distribution of data. One of these statistical adjustments is the dichotomization of data which is generally not suggested with the exception of very skewed data. Since licensing data are so skewed, this adjustment has been used throughout the key indicator methodology. However, an additional adjustment is now warranted given not only the skewness of data but also because of the data being nominal in nature. This additional adjustment I am calling the bi-polarization of data in order to accentuate the differences between the high and low groups within the key indicator matrix.

I have tested several data sets utilizing bi-polarization and found that the results are more significant with its use than without its use. Please keep in mind that licensing data is very different from other forms of data found in the early care and education (ECE) research literature. It is not like the ERS or CLASS data which is more normally distributed and lends itself to more parametric statistical analyses. Licensing data are nominal in nature and always very skewed which means that more non-parametric methods are warranted, such as phi coefficient and dichotomization of data. An example of how this actually works may help.

Licensing data are measured as either being in or out of compliance. There is no middle ground, it is not measured on a Likert scale. Therefore it is nominal in nature, either it is all there or it is not. Licensing data are also measured in the sense that all rules are created equally, in other words, they all have the same weight or importance, such as 1 = compliance; 0 = non-compliance. Being in full 100% compliance which means 0 violations is the goal of a regulatory/licensing system. One does not want to see many violations of the rules because this will place children at risk of harm and the purpose of an early care and education (ECE) licensing/regulatory system is to reduce the potential harm to children. In the licensing measurement literature, this 100% compliant group is generally labeled or considered the high
compliant group. With some licensing laws which allow substantial but not full 100% compliance with the full set of rules, it would then be allowable to have possibly 1 or 2 violations and still be considered in this high compliant group. The low compliant group has been generally any program that had any non-compliance or had 2 or more violations. When these two groups were compared to each individual rule utilizing the phi coefficient formula it was found that a more accurate approach was to accentuate or increase the difference between the high and low groups by eliminating the intervening violations in following manner: high group of 0 violations; 1-4 violations being eliminated; 5+ violations defined as the low group. This additional bi-polarization of data helped to accentuate the differences in calculating the phi coefficient and provided a more sensitive key indicator tool.

Another data distribution issue that should be addressed here that justifies the above cutoffs is that there is very little variance in licensing/regulatory data. Generally the frequency distribution is 20 or less and the average set of rules is over 200 rules. So the frequency distribution is extremely skewed within less than 10% of the potential data distribution. Also, the majority of programs are 100% in compliance with all the rules. And an additional complication is that the scoring of each rule is scored as if it had an equal risk value when in reality the rules can place children at either great risk to relatively little risk if found non-compliant. These measurement issues are very different than in other measurement systems such as ERS or CLASS. The important message to take from this is that rules are not a ruler, they do not measure things equally and cannot be analyzed or compared to other measurement systems that are more normally distributed.

Although licensing is part of the program quality continuum in establishing basic health and safety standards for children, it is a system with measurement limitations that can only be compared on a nominal basis making several statistical adjustments as suggested above necessary.
Problem Solving Coaching = Online Pinging: How to Make Coaching Both Effective and Efficient and Some Additional Individual Learning Advantages

Richard Fiene, PhD & Benjamin Levi, MD, PhD
Penn State Prevention Research Center & College of Medicine

September 2017

The purpose of this short paper is to introduce a potentially new technology that can impact the professional development field as well as learning in general. It is presented for its heuristic value to get us thinking about the possibilities of this new technology as a new online delivery system.

We know that problem solving coaching is an effective quality improvement/professional development intervention (Training, Technical Assistance, and Quality Rating and Improvement Systems) but one that is not particularly efficient. It is very time intensive which drives up cost but it is so much more effective than run of the mill professional development interventions that revolve around workshop or lecture type delivery. (Mathematical Policy Research (2011) has completed a comprehensive review of coaching and its impacts). Many states want to use coaching throughout their technical assistance and quality improvement initiatives but it is not sustainable.

In order to deal with these problems of efficiency, a new technology called “Pinging” has been devised where training/professional development segments can be sent directly to a cell phone/tablet/computer based upon learning algorithms and where no face-to-face interaction is necessary. Everything occurs online with “pings” tied to an assessment of knowledge and/or behaviors that may be lacking which are then reinforced to become more positive. This is a new approach to coaching which is being monitored and evaluated as part of an NIH R01 grant (iLookOut Child Abuse Prevention Training Program, B. Levi, PI) to determine its efficacy, effectiveness, and efficiency.

Going beyond the professional development field there are some direct applications to learning and instruction in general. For example, could pinging be used as a means to individualize instruction and learning to help solve McVicker-Hunt’s “Problem of the Match” or to address Vygotsky’s “Zone of Proximal Development” via a skilled tutor? Could pinging be used as an individualized text for a learner in which based upon an assessment, only content relevant to the learner’s strengths and weaknesses are presented to the learner’s electronic device (laptop computer, tablet, smartphone). Rather than having standardized textbooks that reach maybe
50% of the students, let's have individualized texts that reach 100%; but doing it electronically rather than hard copy. Suddenly this technology could be efficient enough to make this happen. Having individualized texts as hard copy is not cost efficient and could never be sustained, but doing it electronically could be a game changer. It is differential learning rather than one-size-fits-all learning.

Conceptually, think of a bulls-eye with learning opportunities and content spread out all over the bulls-eye but few in the center of the bulls-eye. Now enter pinging where the learning opportunities and content can be targeted to just hit the center of the bulls-eye. This way we can optimize learning opportunities making them relevant to the specific learner which might not be the same learning opportunities for another learner who has a different profile of learning needs.

So what does pinging look like?

Think of the last time you took an exam and did really well on certain aspects of the exam but bombed others. Generally the instructor reviews all the right answers so you get the feedback on what you did wrong but that's where it ends. With pinging, you get an additional learning opportunity to extend learning about what you did not really understand with additional positive reinforcement giving you opportunities to test your knowledge further.

Algorithms are written that tie additional content to every exam question with additional supportive feedback which can be used to reinforce gaps in learning. These algorithms are activated based on the learner's test score. By doing this, we tie assessment to learning via pinging to give the individual learner the opportunity to enhance their learning beyond the assessment. In fact the assessment becomes the driver for additional learning via pinging rather than the assessment becoming the end goal. So rather than learn --> assessment we are changing the paradigm to learn --> assessment --> learn via pinging via multiple path ways. We are creating a learning - assessment - learning continuum. Here is the simple algorithm from the iLookOut program:

*Pre-Assessment --> iLookOut Learning Online Program --> Post-Assessment --> Pings sent (A1, A2, A3, A4..) (B1, B2, B3, B4..) (C1, C2, C3, C4..) (D1, D2, D3..)*

All this additional pinging occurs electronically sent to devices in a gamification format which becomes fun for the learner. It is cost efficient because the content is sent to a device without the need for a coach or instructor to follow up although that is always a possibility for a learner having a great deal of difficulty. An assessment can be done again after the pinging has occurred to determine the change in the learner's knowledge base. Other assessments could be used to see if behavior changes as well as knowledge changes have occurred depending on the content. For example, the NIH R01 grant we mentioned earlier is looking at just that, how knowledge changed about child abuse reporting, but also how it changed actual behaviors in reporting of child abuse, did it make for better reporting where false negatives and positives have decreased?

As we said at the beginning, this short paper or abstract is presented for its heuristic value to get us thinking about this new pinging technology as both a learning and coaching enhancement. The learning principles have been with us for some time, what is different now, is the available technology which could make a costly intervention more cost efficient. We have more questions about the technology than we have answers at this point. It has tremendous potential but we need to determine if it can live up to its billing as an effective and efficient enhancement.
Assessment of the Individual’s Knowledge and Behavior – assessing strengths and areas for improvement.

Online Pinging tied to strengths and areas for improvement. → Badges for proficiency = Professional Development Passport.

Increased Knowledge – focusing on assessment results and areas for improvement.

Change in Behaviors as the Outcome for the Individual – Improved Quality of Care
<table>
<thead>
<tr>
<th>iLookOut</th>
<th>Year 1 8/1/16-7/31/18</th>
<th>Year 2 8/1/17-7/31/18</th>
<th>Year 3 8/1/18-7/31/19</th>
<th>Year 4 8/1/19-7/31/20</th>
<th>Year 5 8/1/20-7/31/21</th>
</tr>
</thead>
<tbody>
<tr>
<td>COMPLETE:</td>
<td>Sequential pings 1-52</td>
<td>Sequential pings 53-104</td>
<td>Sequential pings 105-156</td>
<td>Sequential pings (1-54) + Scenarios + Feedback</td>
<td>Leader Board (if optimal) + Feedback</td>
</tr>
<tr>
<td>iLookOut</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Research study infrastructure</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Content for iLookOut</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Instrument validation</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Filming/editing</td>
<td></td>
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<tr>
<td>Recruitment materials</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Pinging &amp; badging plan</td>
<td></td>
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<tr>
<td>IRB approvals</td>
<td></td>
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</tr>
<tr>
<td>Standard</td>
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<td></td>
</tr>
<tr>
<td>Control</td>
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<tr>
<td>State-wide</td>
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</table>
Better Kid Care Coaching + Online Modules ITERS Statistical Design

Richard Fiene

September 2017

The purpose of this technical research note is to outline the statistical design for evaluating the effectiveness of a coaching intervention and determining the specific relationships between key module content and ITERS indicators. The statistical design has two components: 1) t-tests to determine equivalency (pre-test) of two groups (Coaching and Comparison) and their subsequent sub-scale scores on a post-test after the coaching intervention has been administered. The comparison group will only receive the normal online modules that are readily available to all child care providers.

<table>
<thead>
<tr>
<th>Pre-Test</th>
<th>Post-Test</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coaching</td>
<td>C1</td>
</tr>
<tr>
<td>Comparison</td>
<td>C3</td>
</tr>
</tbody>
</table>

C1 + C3 should show non-significant differences on the ITERS scores. C1 -> C2 should show significant differences on the ITERS based on the coaching intervention. C3 -> C4 should show some significant differences on the ITERS but not as much as C1 -> C2. And lastly, C2 <-> C4 should show significant differences on the ITERS with C2 being significantly higher.

The second component of the statistical design is as follows: 2) correlations will be conducted between the specific online modules and the ITERS indicators (n = 420). Patterns or paths in the data will be determined to ascertain any relationships between how well classrooms did on the ITERS and what specific online module course content was taken.

<table>
<thead>
<tr>
<th>ITERS Indicators</th>
<th>1.1.1</th>
<th>1.1.2</th>
<th>1.1.3</th>
<th>1.1.4</th>
<th>1.1.5</th>
<th>1.1.6</th>
<th>1.1.n........</th>
</tr>
</thead>
<tbody>
<tr>
<td>Modules</td>
<td></td>
<td></td>
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<td></td>
<td></td>
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</tr>
<tr>
<td>1</td>
<td>sign</td>
<td>ns</td>
<td>ns</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td>sign</td>
<td>ns</td>
<td></td>
<td></td>
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<tr>
<td>3</td>
<td>sign</td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td></td>
<td>ns</td>
<td>ns</td>
<td>ns</td>
<td>ns</td>
<td>ns</td>
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</tr>
</tbody>
</table>

By using the above statistical design, one can determine the effectiveness of the coaching intervention and specifically what modules were most effective.
This short paper addresses what I see as the key future analyses and research related to differential monitoring, key indicators, and risk assessment methodologies. Most of these analyses can most likely be performed via predictive analytics.

**Research Questions:**

1...There is the need to address the point system within the Differential Monitoring Scoring Protocol (DMSP©) by looking at the probability that the various key elements will occur based upon the research literature. For example, PC x PQ is .5 based upon NQI data because 50% of the states have QRIS systems. This is how all the algorithms would play out if a probability assessment is used rather than the scoring protocol I developed. The scoring protocol mirrors the probability figures as follows:

- \( PC + PQ = .50P/4PTS \)
- \( KI + RA \rightarrow DM = .50P/4PTS \)
- \( PC + KI \rightarrow DM = .25P/2PTS \)
- \( PC + RA \rightarrow DM = .25P/2PTS \)

2...There is the need to show how KI and RA are integrated mathematically or via an algorithm.

3...With the effectiveness and efficiency relationship curves (see my DMLMA Powerpoint slides). The effectiveness and efficiency lines are curvilinear rather than linear and cross each other at a substantial compliance level rather than earlier which is more typical with linear data.

4...HSKI as the best case example which incorporates all components. Full data sets, report, training slides, validation data, promotional slides, web site, most details and national DB. This needs to be documented fully and written up as a case study.

5...Run phi correlation against Logit regression, compare results.
6...2 x 2 phi to a 2 x 3 chi square. High/Low frequency matrix to Full/Substantial/Low frequency matrix.

7...ECPQIM/PAM/Measures = DM/Clustering/DMSP//KI/Classification/Matrix//RA/clustering/Likert. There needs to be a paper written on the relationship between ECPQIM, predictive analytics modeling (PAM), and the actual measures used for each ECPQIM Key Element. I started this paper but it needs to be fully developed (see DATA File Folder).

8...Try different cut offs and see how results are impacted. I started to do this with the GA data base. The more the indicators, the higher the correlation between IC and CI. KI8 --> KI15. The question becomes what is the best level? KI10, KI9, KI13??? This analysis ties back to the efficiency and effectiveness relationship because as one increases the number of indicators, the effectiveness increases but the efficiency of the model drops off. The opposite is also true.

9...Use HS/KS/IL/GA data bases to run the various analyses. These data bases are available for doing all these analyses.

10...DM = YES OR NO, BASED UPON COMPLIANCE HISTORY; H = YES (100-98); L = NO (97-); YES = KI AND/OR RA (ABBREVIATED INSPECTION); NO = CI (FULL INSPECTION); CLUSTERING OR CLASSIFICATION. These are the various key elements of ECPQIM and the types of analyses within predictive analytics modeling (clustering or classification analysis).

11...DMSP – 0-10; CLUSTERING (0,2,4,6,8,10). DMSP – Differential Monitoring Scoring Protocol is an example of clustering analysis via predictive analytics modeling.

12...KI -- .25+; CLASSIFICATION; either it is included or not. KI – Key Indicators is an example of classification analysis via predictive analytics modeling.

13...RA – 9 OUT OF 10 (9+); HIGH RISK; CLASSIFICATION; either it is included or not. RA – Risk Assessment is an example of classification analysis via predictive analytics modeling.